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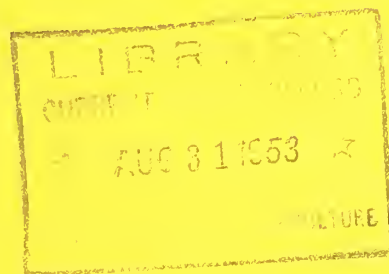
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The Establishment of Central Market Butter Prices in Chicago and New York



UNITED STATES DEPARTMENT OF AGRICULTURE
Production and Marketing Administration
Washington, D.C.



PREFACE

This publication covers the report on a study by the Production and Marketing Administration, U. S. Department of Agriculture. The project was undertaken in cooperation with the North Central Committee on Dairy Marketing Research, with the understanding that the Committee would study butter pricing problems at the creamery level and the Dairy Branch of the Production and Marketing Administration would study butter price establishment in the New York and Chicago central markets. The regional committee has already issued a report of their findings on butter pricing at the creamery level. Findings of the regional committee and free discussion of interrelated problems were very helpful in preparing this report.

Numerous individuals and organizations cooperated in supplying information which appears in the report. The major receivers and distributors of butter provided much of the information on which the report is based. Their cooperation and willingness to discuss the problems involved was of great assistance to the writers.

Special credit is due to Floyd Simpson, local representative, USDA Dairy and Poultry Market News Service at Chicago, and to L. M. Davis, Chief, Market News Service, Dairy Branch, for their cooperation.

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The study on which this report is based was conducted under authority of the Agricultural Marketing Act of 1946 (RMA Title II).

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SUMMARY

Butter price information for Chicago and New York is currently collected at two points: (1) The spot butter boards of the New York and Chicago mercantile exchanges; and (2) the wholesale "open market." The types of transactions which take place at these points provide the best information about the net effect of the forces which determine the value of butter throughout the country.

Wholesale butter prices at Chicago and New York are reported daily by the U. S. Department of Agriculture, as well as by commercial market reporting agencies. USDA prices are based on the wholesale sales between butter dealers. These are described as open market sales. Only a relatively small proportion of the wholesale sales reported by USDA take place on the spot butter boards of the mercantile exchanges.

The butter quotations for Chicago and New York issued by the commercial market reporters are based exclusively on exchange trading and are widely used by the trade as a basis of settling with creameries for butter and as a basis for selling butter.

Trading on the exchanges lasts for only a few minutes each day, whereas wholesale trades between dealers take place throughout the day.

Despite the conclusion that butter price information is collected at the points where the net effect of the forces which bring about changes in the value of butter may best be observed, the mechanism through which prices are determined is not wholly satisfactory. It might be improved if the spot butter markets of the mercantile exchanges could be made more attractive as places for receivers to conduct more of the limited open-market trading in bulk butter.

Approximately 85 to 90 percent of the butter marketed tends to bypass the wholesale open market, and only 10 to 15 percent of the butter handled by major receivers is bought or sold on the open market in transactions that could potentially be executed on the exchanges. During 1951 about 8 million pounds of butter were sold on the spot butter boards of the mercantile exchanges. Through liberalizing the butter-trading rules of the mercantile exchanges, the volume of trading might be increased to possibly 40 to 50 million pounds annually.

Receivers stated that the spot butter markets of the mercantile exchanges were unsatisfactory places to buy or sell butter because: (1) Receiving and handling costs and premiums are not recoverable on exchange sales and therefore very limited quantities are offered for sale on the spot call; (2) it is inconvenient to offer supplies on the spot butter call

if they are not located in Chicago or New York or to accept delivery of supplies at Chicago or New York when wanted elsewhere; (3) butter is not available for inspection prior to purchase; and (4) the buying or selling of large quantities of butter on the spot call has a disproportionate effect on the quotations.

Chicago and New York mercantile exchanges might broaden their functions as market places if certain changes in the spot butter rules were made, as follows:

1. Make it possible for receivers to offer butter on the spot call which is located at various country concentrating points outside of Chicago or New York.
2. Provide for a fuller description of butter offered on the exchange, including such factors as salt and color.
3. Provide the buyer pay the seller a receiving and handling allowance for butter purchased on the spot call.

Findings relating to certain criticisms of central market butter prices were as follows:

1. Premiums over the commercial quotations are frequently paid to creameries and in the open market. This is not a serious weakness for those who understand the nature of the quotation. But, it would be desirable to develop periodic reports of the level of premiums being received by creameries.
2. Butter prices have fluctuated considerably from day to day at certain times but are not more variable than the prices of several other agricultural commodities.
3. Central butter market quotations are based on a limited volume of trading by a relatively few traders on the Chicago or New York mercantile exchanges. Such trading is generally undertaken primarily for the purpose of adjusting values and not for the purpose of buying or selling butter.
4. Many of the major receivers and distributors trade only infrequently on the exchanges, but they are usually represented at the trading sessions and are prepared to buy or sell butter on the exchanges, if necessary, to protect their interests as to value. A trader cannot keep the market out of line with the sentiment of the trade for more than a short time unless he is willing to buy or sell sizable quantities of butter. Nevertheless, the thinness of the market makes it possible for an individual to occasionally exert disproportionate influence on the market for short periods of time.

THE ESTABLISHMENT OF CENTRAL MARKET BUTTER PRICES

IN CHICAGO AND NEW YORK X

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INTRODUCTION

The price of butter is important in the dairy economy. Approximately one-quarter of all milk produced in the United States is used for the manufacture of butter. Prices paid to producers for milk and cream are closely related to the price of butter. Cream for fluid use and for ice cream is generally priced on a formula basis related directly to the price of butter. Minimum prices to be paid producers under numerous Federal milk marketing orders are frequently based on butter-powder or butter-cheese formulas. ^{1/}

Butter has often been called the balance wheel of the dairy industry. Milk supplies are diverted into butter when no other market outlets are available. Butter generally represents the lowest "use value" for milk, and the price of butter reflects a floor price below which milk prices rarely go. General supply and demand conditions for all milk products influence the price of butter.

The price of butter, being reflected throughout the dairy economy, is of interest to many persons other than those who make or distribute butter.

Persons in the dairy industry, particularly producers and creamery operators, have at times complained of certain aspects of the manner in which butter prices are established and of certain characteristics of butter prices.

Most of the complaints may be grouped into three categories: (1) The level of prices; (2) the instability of prices; and (3) the "thinness" of the basis for establishing values.

^{1/} As of December 1, 1951, there were 44 Federal milk marketing orders in effect. In 32 of these orders, butter-powder formulas were used as the "basic formula price" or as one of several alternative bases for establishing prices to be paid for Class I milk. In 20 of the Federal milk marketing orders, butter-cheese formulas were used as one of several alternative bases for establishing prices to be paid for Class I milk. Butter-powder and butter-cheese formulas are also used in numerous Federal milk marketing orders for establishing minimum prices to be paid to producers for surplus milk.

The major complaint concerning the level of prices is that central market butter prices do not represent prices at which large quantities of butter are bought and sold but have a chronic tendency to "underquote" the market. The payment of premiums to creameries is looked upon as evidence that this tendency is true.

Complaints relating to the instability of prices were particularly common during 1946, 1947, and 1948 when daily butter prices fluctuated violently, and, at times, in a manner which supply and demand conditions did not appear to warrant. Complaints concerning the thinness of the basis for establishing values are closely related to the complaint that butter prices fluctuate "too much," in that the thin basis on which values are determined is looked upon as a major cause of price instability.

Complaints concerning the thinness of the basis for establishing prices included the following: (1) Butter prices are established by a few receivers on the basis of a limited volume of trading (implying that the market is vulnerable to manipulation); (2) many large buyers and sellers take no direct part in establishing values; (3) the development of large integrated marketing organizations which control the distribution of butter from creamery to retailer or institutional user has greatly reduced the trading in wholesale bulk butter, but the price-making system has not kept pace with changes in the manner in which butter is marketed; and (4) certain rules of the mercantile exchanges tend to restrict participation in the establishment of prices.

The study reported in this publication was part of a larger study of the central dairy markets and of the manner in which prices of dairy products are established. The purposes of this report may be listed as follows:

1. To describe the Chicago and New York wholesale butter markets with particular attention to the manner in which central market prices are established and how they are used in buying and selling butter.
2. To determine whether the trading in wholesale bulk butter in the central markets, particularly on the spot boards of the Chicago and New York mercantile exchanges, is of such a nature that the forces of supply and demand are adequately brought to focus.
3. To determine the features of the marketing system which may have a bearing on day-to-day fluctuations in the price of butter.
4. To examine the charge that central market quotations understate the "true" value of butter.

THE BUTTER MARKETING SYSTEM

Butter is manufactured at some 3,000 plants throughout the country. Approximately 70 percent of these plants are located in the West North Central and East North Central regions. Eighty percent of the butter manufactured in the United States is produced in these two regions. Minnesota, Iowa, and Wisconsin, in that order, are the three leading butter-producing States.

A recent study of creamery pricing practices indicated that the average creamery is small and has limited financial resources; and that creameries do not ordinarily store butter or hold butter for better price offers. ^{2/} Because of limited capital, most creameries must sell their butter as it is manufactured in order to pay their milk producers regularly. The average creamery manager finds that the problems relating to the manufacture of butter and other plant operations constitute a full-time job and leave little time in which to seek outlets for his butter. His training ordinarily is in the field of dairy manufacturing and not marketing.

It is not uncommon for creameries to continue to sell to the same outlet year after year. The creameries surveyed in the North Central States indicated that price was a less important factor in deciding where to sell their butter than was confidence in an "old customer." ^{2/} Of course, as pointed out in that survey, confidence in an "old customer" many times may stem from receiving satisfactory returns for butter from that customer over a period of time.

Ordinarily, creamery managers do not take any steps to control production. Manufacturers of evaporated milk, for instance, at times will cutoff producers in order to restrict production. The creamery manager is usually willing to process all milk or cream which producers wish to deliver and ordinarily is willing, or at least finds it necessary, to sell butter as it is manufactured regardless of the "market."

Sales Agreements

Butter is generally sold by creameries on the basis of a sales agreement with a receiver of butter. The sales agreement system has served to provide creameries with a regular outlet for their butter, and has provided primary receivers with a regular source of supplies. Also, the sales agreement has served as a means by which primary distributors have been able to obtain supplies of butter of uniform quality and of particular flavor

^{2/} Cook, H. L., Kelley, P. L., Koller, E. F., and Miller, A. H. Butter Pricing and Marketing at Country Points in the North Central Region. Minn. Agr. Expt. Sta. Tech. Bull. 203-5966. June 1952.

characteristics and it has relieved the creamery managers of most of the effort that might otherwise be required in selling their product--an effort they are ill equipped to make, both because of their training and because of the financial condition of most creameries.

Sales agreements are often no more than verbal understandings between the receiver and the creamery. Such agreements set forth the basis on which the receiver will make settlement with the creamery, and usually they specify where the butter is to be delivered. They ordinarily provide that creameries will be paid for their butter on the basis of a central market price quotation for butter on a certain day, frequently the day that the butter arrives at a specified destination. The price quotations most frequently used are the Urner-Barry quotation for the New York market, and Chicago Price Current quotation for the Chicago market. ^{3/} These agreements generally provide that the creamery will be paid a premium or in some cases a discount from a central market quotation. The agreements usually include terms as to whether the creamery or receiver bears the cost of shipping the butter, and the agreements also include other provisions, many of which have a bearing on the net price received by the creamery.

Primary Receivers

Butter is shipped from creameries into the hands of the following major types of primary receivers: Central market wholesalers; butter marketing cooperatives; chainstores; large dairy corporations; and meat-packers. ^{4/}

Information obtained during this survey indicates the relative volumes of butter handled by various types of primary receivers. (See table 2 page 26.) This information differs rather markedly from information obtained from creameries in the North Central Region concerning the types of outlet to which they sold butter. ^{5/}

Development of Direct Buying from Creameries by Receivers

The manner in which butter is marketed has changed considerably since 1900. At that time, creamery butter was generally sold on a commission

^{3/} See p. 19 of the publication cited in footnote 2, p. 3.

^{4/} Central market wholesalers for purposes of this study are considered to be primary receivers of butter not included in the other four categories mentioned. Nearly all such firms are located in Chicago or New York.

^{5/} See p. 17-18 of source cited in footnote 2, p. 3. Information concerning sales outlets of creameries in the North Central Region did not generally include information with respect to the large centralizer type creameries which are important sources of supply for certain of the meat packers and large dairy corporations. This fact is believed to account for much of the discrepancy between the data in the two surveys. The wholesaler-jobber category in the North Central Regional study may have been broader than the central market wholesaler category used in this survey.

basis in the wholesale market. Quintus 6/ points to several reasons for the shift from the commission basis to the sales agreement system of direct procurement: (1) The gradual reduction or elimination of many of the marketing risks which once accompanied a sale. In the early 1900's, butter was much more heterogeneous as to quality, storage facilities were poor, rail service often was slow and irregular, and chances of deterioration in transit were considerable. (2) Country shippers were dissatisfied with the commission system. (3) Buyers found it desirable to establish regular sources of supply.

Changes which took place in the marketing system during the period 1918-38 are well described by Nicholls. 7/ These changes may be summarized as follows: (1) The development of a system of direct buying from creameries by firms that then controlled the distribution of the butter to the retailer. (2) The development of large dairy corporations with facilities for handling the distribution of butter direct from creamery to retail store or institutional user. (3) The resulting reduction in volume of butter handled by wholesalers in central markets which in turn led to a reduction in the number of wholesalers and jobbers, and to the development of a new type of wholesaler-jobber whose operations included many of the functions formerly performed by jobbers.

One characteristic of these changes is that they have created a situation in which most primary receivers are much more active as buyers than as sellers of wholesale bulk butter.

Government Operations

The Federal Government has been an important factor in the butter-marketing system since the middle 1930's. During the years 1933-41, the Federal Government through various devices engaged in butter price stabilization programs. During that period, the Government purchased 270 million pounds of butter. Of this amount, 142 million pounds were purchased in 1938. Price ceilings on butter were in effect from late in 1942 through June 30, 1946. During most of that period, a subsidy of 5 cents per pound was paid by the Reconstruction Finance Corporation. Since 1949, the Commodity Credit Corporation has supported milk and butterfat prices through offers to buy butter and other manufactured dairy products at specified prices. During 1949 and 1950, 242 million pounds of butter were bought by Commodity Credit Corporation under the milk and butterfat price-support programs. Virtually no butter was bought for support purposes during 1951 nor in the first 11 months of 1952 because market prices were generally above support levels.

Since 1933, there have been few years during which butter marketing has not been considerably influenced by Government marketing programs or controls.

6/ Quintus, Paul E. Wholesale Butter Prices and Premiums. Jour. Farm Econ. Vol. 3. Part I. August 1939.

7/ Nicholls, William H. Post-War Developments in the Marketing of Butter. Res. Bull. 250. Iowa State College. Agr. Expt. Sta. (February 1939.)

THE CHICAGO AND NEW YORK WHOLESALE BUTTER MARKETS

The Wholesale Level of Trade

The wholesale level of trade with respect to many commodities is rather ill defined. Wholesale transactions are characterized by sales in volume to middlemen who perform further services before the commodity is distributed to the retailer. Size of transaction and extent of services rendered appear to be important criteria in defining wholesale transactions.

For purposes of definition, wholesale or open-market transactions may be defined as transactions involving sales by receivers of bulk (unprinted) butter in volume, such sales being for cash or short-time credit, and not made on the basis of a fixed and previously agreed on markup over some published quotation. 8/

There are few concerns which are engaged primarily in the business of wholesaling bulk butter and the volume of wholesale trading is relatively limited. The nature of wholesale trading is described in detail under the heading "Buying and Selling Practices of Wholesale Butter Receivers."

The Central Market Wholesaler

All the major types of primary receivers of butter at times sell wholesale bulk butter. The selling of bulk butter at wholesale is a more important part of the business of the central market wholesaler than it is of the other types of primary receivers. For the purposes of this report, chainstores, meatpackers, large dairy corporations, and marketing cooperatives are not considered wholesalers. The term "wholesalers" will be used to refer to central market wholesalers whose activities are described as follows:

The functions performed by wholesalers vary considerably. The wholesaler in the central market in many cases performs the jobbing function as well as the wholesaling function.

The number of wholesalers in Chicago and New York has declined considerably. 9/ Many wholesalers remaining in the central butter markets have

8/ It is this type of transaction on which wholesale selling prices reported by the USDA Market News Service are largely based. However, certain types of contract sales are also reported by USDA.

9/ An estimate given by a person who has been closely associated with the Chicago butter market for a number of years was that 30 years ago there were approximately 35 butter wholesalers in the market as compared with about 6 to 8, in 1952, of whom 3 handled most of the butter.

adapted their operations to the more integrated system of marketing which was developed. They have been forced to do this to compete effectively with the other types of integrated marketing organizations such as the meatpackers, chainstores, large dairy corporations, and marketing co-operatives.

There still are a relatively small number of "old-line" wholesalers who have not developed a jobbing business but have continued to sell only wholesale bulk butter. These wholesalers often find it difficult to compete with the highly integrated receivers for supplies at the creamery level and as a result often depend on other dealers for a considerable proportion of their supplies. Such wholesalers have been able to resist changes which have taken place in the distributive system apparently because of the fact that they have on the one hand established over the years satisfactory relationships with creameries, and on the other hand have a number of longtime customers. It is not uncommon to find a creamery that has shipped to the same receiver for 25 years.

It is interesting to note that the "old-line" wholesalers who do exist are nearly all located in New York, being almost nonexistent in Chicago. The New York market still has a number of jobbers who serve the large number of delicatessens, small grocery stores, and the numerous hotels and institutional users found in New York City. Many of these jobbers depend largely on wholesalers in the market for supplies.

Although the number of wholesalers in the central markets has declined considerably in the last 30 years, those who remain play a most important function—that of balancing supplies—in the marketing of butter. The chainstores, large dairy corporations, and the meatpackers—even though they obtain a large proportion of their supplies directly from creameries—at times depend on large wholesale distributors as sources of supplies of butter. Also, the wholesaler provides an outlet for surplus butter which the large integrated butter-marketing organizations have on hand at times. They tend to complement the integrated system of marketing.

The existence of diversified manufacturing operations probably tends to increase the importance of the butter wholesaler-jobbers who remain. Creameries that have facilities for manufacturing other dairy products as well as butter are a much less dependable source of supplies for a receiver than are creameries which do not have such facilities. Receivers obtaining supplies from these diversified plants at times may have to buy large quantities of butter on the open market from other receivers if their diversified plants divert milk supplies from butter to other products, or may on the other hand sell large quantities on the open market if the diversified plants which ship to them divert large quantities of milk into butter.

By absorbing the variable supplies of butter, taking the unwanted butter, and supplying the large integrated distributors when their regular sources of supply are inadequate, the central market wholesalers find themselves in the position where the actual value of butter in terms of dollars

and cents is of more concern than it is to merchants whose business is largely limited to the supplying of butter to a regular trade. Such wholesalers occupy a position where changes in the supply-demand picture may first be noted. Because of the position which they occupy in the marketing system, they find themselves shouldering a large part of the responsibility of establishing values.

Receipts of Butter at Chicago and New York

Annual receipts of butter at Chicago during the early 1920's averaged slightly more than 17 percent of total annual production. Annual receipts of butter at New York amounted to slightly more than 18 percent of total annual production in that period. During the period 1948-51, annual receipts of butter at each of these markets averaged slightly more than 12 percent of total annual production. Minnesota and Iowa are the main sources of butter for the New York market. Wisconsin is the principal source of supplies of butter at Chicago, although Iowa and Minnesota both supply large quantities of butter to the Chicago market.

Receipts of butter at Chicago show a much more pronounced seasonal pattern than do receipts of butter at New York. This indicates that more of the seasonal surpluses of butter are stored in Chicago than in New York.

The Chicago Wholesale Butter Market

Chicago's wholesale butter dealers are located in different parts of the city. Several large dealers are located in the Fulton Street Market, adjacent to the Fulton Cold Storage Warehouse, others are located in the area of the Produce Terminal Cold Storage Warehouse. Other large receivers have their places of business at various points in the city. This is in contrast to the New York market where the majority of receivers are located in an area about 3 or 4 blocks square. Many of the larger Chicago receivers store their butter at various concentration points in the Midwest, and large quantities of this butter are shipped to markets throughout the country.

Six butter receivers in the Chicago butter market may be described as wholesalers. It is estimated that three of these wholesalers handle approximately 125,000,000 pounds of butter annually. The volume handled by the other three wholesalers in the market is estimated to be not in excess of 15,000,000 pounds annually.

In the Chicago market, there are also several food distributors who, although they cannot be accurately described as butter wholesalers, are very important factors in the wholesale butter market at times. These food distributors are not in the business of distributing butter and at times may be out of the butter business entirely. When they see the possibility of making a speculative gain they may buy or sell large quantities of butter in the open market. They are also important factors in the butter futures market.

The Chicago market has few butter jobbers who may not also be classed as wholesalers and they are an unimportant factor in the distribution of butter. The jobbing function is carried out by the wholesalers and the large chainstores, the meatpackers, the large dairy corporations, and the large butter-marketing cooperatives, all of whom have distributive outlets in the city.

One of the largest wholesalers in Chicago has a highly integrated operation, buying virtually all of his supplies from creameries and selling nearly all of his supplies to regular outlets. The quantity of butter bought or sold by this dealer on the open market is relatively small. This leaves two large wholesalers as the important open-market distributors of wholesale bulk butter. Available information indicated that these two wholesalers are important sources of supply of wholesale bulk butter for those New York dealers who depend on other dealers for supplies.

The Chicago butter market is in many respects a national market rather than a local market. Receipts at Chicago amounted to about 13 percent of the butter produced in 1951, but the population of the Chicago metropolitan area was only about 3 percent of the population of the United States. It is in Chicago, rather than in New York, that surpluses generally are disposed of or supplies obtained.

The New York Wholesale Butter Market

The New York wholesale butter market is located in a very compact area in lower Manhattan bounded by Hudson, Greenwich, Franklin, and Chambers Streets on the East, West, North, and South, respectively. Within this area are located nearly all the important butter wholesalers and jobbers and the New York Mercantile Exchange. Most of the major egg receivers and distributors also are located in this area.

The butter receivers and distributors' places of business line the narrow streets. The typical wholesaler's house is a narrow 2-or-3-story building. It is not uncommon to find as many as 25 or 30 different wholesalers or jobbers' stores located in a single block.

There are probably not more than 12 to 15 dealers who may be classed as wholesalers in the market, but there are approximately 150 butter jobbers. The important chainstores, the meatpackers, the large butter-marketing cooperatives, and the large dairy corporations all have important distributive outlets in New York. One large Chicago wholesaler has a New York branch, and another Chicago wholesaler has a New York representative who is a member of the mercantile exchange.

The estimated quantities of butter handled by New York wholesalers total about 65,000,000 pounds, but this figure includes probably 15,000,000 pounds of open-market trading between wholesalers.

New York is more of a consuming market than a distributive market. A larger proportion of the butter received in the New York market is sold

and consumed in or near the metropolitan area than in Chicago. Relatively little butter is sold to the large secondary markets such as Boston or Philadelphia; such markets receive their shipments directly from creameries in the Midwest or from Midwestern wholesale distributors and integrated marketing organizations such as the chainstores, large dairy corporations, and the meatpackers.

Another characteristic of the New York butter market is that the jobber is a much more important factor in the marketing of butter than in most other markets at the present time. This is owing primarily to the large number of small grocery stores, delicatessens, restaurants, and hotels in New York.

Another factor influencing the number of jobbers in the market is the demand for specialty butter products, particularly sweet butter and whipped butter.

The operations of even the larger wholesalers in New York are small compared with the volumes of butter handled by several Chicago wholesalers. No wholesaler in New York handles more than 15 to 20 million pounds of butter, and only 4 or 5 wholesalers are in the 10 to 15 million pound category. The operations of the New York wholesalers have changed less than have those of the Chicago wholesalers. In New York, there are a few butter dealers who regularly wholesale bulk butter and who buy a sizable proportion of their supplies from other dealers rather than direct from creameries.

One of the larger distributors in the New York market obtains nearly all of his supplies of butter from other dealers in the market and from Chicago dealers and practically none of his supplies directly from creameries. There is considerably more open-market trading between dealers in New York than in Chicago, and for this reason the basis for reporting wholesale selling prices on open-market sales is probably broader in New York than in Chicago. (See table 3 page 27.)

THE SPOT BUTTER MARKETS OF THE MERCANTILE EXCHANGES

Trading on the spot butter markets of the Chicago and New York mercantile exchanges provides most of the information on which commercial market reporters base their price reports or "quotations." The exchanges do not make or quote prices. They take the position that they merely provide a market place where buyer and seller may meet, and that any interpretation which is made of the trading which takes place is not under their control and for that reason is not something for which they assume any responsibility. Nevertheless, the value-establishing function of exchange trading ought not to be disregarded. Since the exchange trading plays such an all-important part in establishing the quotation, the nature of trading on the mercantile exchanges and the rules under which such trading is conducted are important.

The Chicago Mercantile Exchange

The Chicago Mercantile Exchange was organized in 1919 as a non-profit organization. It provides facilities for trading in cash or futures contracts for eggs, butter, onions, apples, potatoes, frozen eggs, and dressed poultry. The exchange is governed by a board of directors who have adopted rules and regulations governing all operations. A business manager is responsible for execution of such rules and regulations.

The Chicago Mercantile Exchange has been designated as a contract market by the Secretary of Agriculture in accordance with the Commodity Exchange Act and members of the exchange are required to comply with all provisions of that act.

Membership of the exchange is limited to 500. Memberships are available to anyone of acceptable financial, moral, and commercial standing. The exchange has at present 60 clearinghouse members. Clearinghouse members execute all trades on the floor of the exchange for nonmembers and for other members. Any partnership or corporation of which two of the officers or partners are members may become a member of the clearinghouse. Of the clearinghouse members, 16 are important distributors of butter. Several of the most important distributors are not clearinghouse members; they can, however, trade on the exchange through brokers who are members of the clearinghouse.

How trading is conducted

Trading in cash butter is conducted by voice. Those who have butter to sell offer it for sale and such offers are posted in the order made, on the offer board, along with the price at which the offer was

made and the grade and quantity offered. Those interested in buying, call out bids. Such bids are posted in order on the bid board along with information as to the grade and quantity bid on and the price. All bids or offers remain on their respective boards until they are withdrawn by the maker or are accepted by another broker. Transactions become official when a bid and an offer are matched. The transaction is then recorded on the sales board, and the time at which the transaction was completed is listed. Figure 1 shows the spot butter board of the Chicago Mercantile Exchange at the close of a day's trading. The offers, bids, and sales are listed in their respective columns.

Rules governing trading in spot butter

Rules relating to the trading in various commodities on the mercantile exchanges are necessarily very detailed and cover all phases of the transaction.

The Rules regulating trading in spot butter affect the use of the exchange as a market place, the costs of buying or selling on the exchange, characteristics of butter which may be obtained, and the ease with which exchange facilities may be used. What is more important from the standpoint of the quotation, the rules may affect the price at which dealers are willing to buy or sell butter on the exchange relative to prices in open-market transactions.

Important rules of the Chicago Mercantile Exchange regulating the spot butter call may be summarized as follows:

1. Butter must be delivered from a defined area within the city of Chicago which includes the major produce warehouses, produce markets, and railroad terminals. It must be on track, in store, or in the cooler room of an approved warehouse.
2. Butter must be tendered for delivery by noon of the first business day following day of sale.
3. Butter must carry inspection and weight certificate when tendered for delivery. (Such inspection and grading is presently being performed by USDA graders.)
4. Each offer must specify grade, whether fresh or storage, and place of delivery.
5. Minimum price change is 1/4 cent.
6. Offerings must be straight lots (one creamery's make of one grade packed uniformly at one time, unless posted as miscellaneous lots). No lot shall contain less than 50 boxes. The minimum trading unit, therefore, is 50 boxes (about 3,200 pounds). In delivering miscellaneous lots, no lot shall contain less than 50 boxes.

BUTTER						
Sellers	Quantity	Grade	Offers	Bids	Buyers	Sales
1						
2						
3						
4	J.L.M.	700	792	65-	1001	N. Jay 65-
5			"			
6			"			
7			"			
8			790			
9			"			
10	N. Jay	1	"	64-		
11	H. Jay	5	"	6425		
12	N. Jay	1	"	6425		
13	Ash	1	"	6425	64-	N. Jay
14	N. Jay	1	"	952	6425	Bks 6425
15			"			
16	H. Jay	120	" Misc	64-		
17	J.L.M.	100	"	948	64-	Bks 64-
18	J.L.M.	100	" Misc	10.00	6350	H. Jay 6350
19	J.L.M.	200	" Misc	947	64-	Bks 64-
20	N. Jay	100	"	957	64-	Bks 64-
21	J.L.M.	100	"	64-		
22	H. Jay	1000	" Misc	64-		
23			"			
24			"			
25			"			

Closed

(TIME AT WHICH SALE WAS MADE)

Figure 1.—Spot butter board of the Chicago Mercantile Exchange.

7. Bids and offers shall be for bulk butter packed in corrugated or fiber boxes or new or reconditioned tubs. Weights of packages must be in the range of 50 to 80 pounds.
8. Branded butter may not be offered.

Butter is not available for personal inspection by the prospective buyers prior to purchase.

Because of the fact that butter sold on the spot call must be tendered for delivery by noon of the day following sale and must be delivered in the city of Chicago, it is difficult for butter which is not located in or near Chicago to be offered for sale on the spot call.

The butter rules of the Chicago Mercantile Exchange were amended on May 24, 1948, to provide for an additional option: a 72-hour call, which was designed to facilitate offerings of butter from various points in the butter-producing areas. ^{10/} This amendment to the rules provided that butter might be offered on the 72-hour call for delivery not later than noon of the third day after the day of sale. Receivers have chosen not to use the 72-hour call. Since it was adopted in 1948 virtually no butter has been sold on it. It is significant that the attempt to broaden the trading base by adopting the 72-hour call was unsuccessful. Apparently it was not suited to the needs of the trade.

The New York Mercantile Exchange

The New York Mercantile Exchange was founded in 1872. Commodities traded there are butter, eggs, turkeys, rice, potatoes, dry beans, and onions. The exchange is located at 6 Harrison Street in the heart of the New York wholesale butter market. Membership is available to anyone of suitable financial, commercial, and moral standing. The membership at the present time is 367.

Rules governing trading

Rules regulating trading in butter on the spot call of the New York Mercantile Exchange are very similar to those of the Chicago Mercantile Exchange. Members of the New York Mercantile Exchange may trade as brokers for other members or for nonmembers. Rules with respect to delivery of butter sold on the spot call differ slightly from those at Chicago. At Chicago butter must be delivered within 24 hours of sale, whereas butter sold on the spot call at New York must be ready for immediate delivery. However, at New York the seller has the option of two tenders; first tender must be ready for immediate inspection, and if butter does not appear of grade and class sold, second and final tender must be made not later than 3 p.m. of the day of sale.

^{10/} The amendment was adopted on the basis of recommendations made by a committee comprised of representatives of several large butter receivers, butter-marketing cooperatives, and creameries. This committee was formed early in 1948, a time when butter prices were fluctuating severely. The committee was known as the Tri-State Butter Committee.

The New York Mercantile Exchange has another cash butter call which is described as "Seller PM." Butter sold "Seller PM" must be ready for delivery by 3 p.m. of the day of sale. The New York Exchange also has a call described as "Ten Day Option" which provides for delivery in accordance with spot butter rules in a period not to exceed ten days. The "Seller PM" call and the "Ten Day Option" are rarely used.

Costs of Buying and Selling on the Spot Butter Markets

Buying and selling of butter on the spot markets of the mercantile exchanges involve certain costs which might not be involved in open-market trading.

1. Grading costs are borne jointly by seller and buyer and amount to approximately $4/100$ cent per pound.
2. Brokerage fees established by the Chicago Mercantile Exchange are $1/8$ cent per pound for members trading through clearinghouse members and $1/4$ cent per pound for nonmembers. Clearinghouse members trading for their own account pay no brokerage fee. New York Mercantile Exchange brokerage fees are 5 cents per package (about 0.1 cent per pound) with respect to transactions by members for other members, $1/4$ cent per pound for nonresident members and $1/2$ cent per pound for nonmembers. Members trading for their own account pay no brokerage fee.
3. For dealers not customarily doing business in Chicago or New York, there is the cost and inconvenience of diverting butter into Chicago or New York in order to be able to offer the butter on the spot board, or the possible inconvenience of accepting delivery at Chicago or New York.

Significance of Certain Rules Governing Trading in Spot Butter

The fact that butter sold on the spot call must be ready for 24-hour delivery in Chicago and immediate delivery in New York tends to limit the amount of butter available for trading on the spot call at any particular time. The quotations resulting from trading on the spot butter boards of the Chicago and New York mercantile exchanges are used as the basis for determining butter prices throughout most of the country, yet rules requiring delivery from points in Chicago and New York may tend to overemphasize local market conditions at times. Butter distributors assembling supplies at country points rather than in Chicago or New York find it more difficult and more costly to use the facilities of the mercantile exchanges than do wholesalers and other distributors who receive and distribute butter in Chicago and New York. Creameries find it difficult to use the facilities of the exchanges because of rules requiring that butter which is sold on the exchange must be delivered at Chicago or New York within a limited time.

The fact that butter bought on the exchange must be purchased without the buyer having adequate knowledge of color, salt, or certain other characteristics of the butter was given by some receivers as a reason why they preferred to buy supplementary supplies from other dealers on the open market rather than on the spot call. This point is related to the "butter rules" to the extent that it might be possible, through amending the rules, to permit more detailed description than is now possible of butter being offered or bid for.

Butter Futures Market

The most active butter futures market is that of the Chicago Mercantile Exchange. The New York Mercantile Exchange also has a butter futures call but it is relatively much less important than that at Chicago. The futures market is used by the trade in hedging storage holdings of butter and to some extent by ice cream manufacturers and other dairy product processors as a hedge against market fluctuations, particularly in hedging storage cream. Studies made by the Commodity Exchange Authority indicated that open contracts at the end of January 1941 were equal to about 33 percent of storage holdings. This proportion was approximately the same as that in the preceding 5 years. 11/

Ordinarily prices in the futures market and the spot market are closely related to one another, the futures market theoretically exceeding the spot market at a given time by the cost of carrying butter from that time to the closing date of the futures contract. Theoretically, if this relationship gets out of line, adjustments immediately take place which tend to restore this relationship.

Sales of butter futures contracts for delivery in November and December 1951 and January and March 1952 amounted to 102 million pounds, 1.2 million pounds, 84 million pounds, and 1.1 million pounds, respectively.

During the into-storage season the November futures market tends to have a stabilizing influence on the spot market. This influence is not present to the same extent during much of the out-of-storage season.

At times, changes in the spot market appear to be directly related to speculative activity in the futures market. Also, the demand for butter to meet outstanding commitments in the futures market near the end of the delivery period creates an element of demand which may have considerable influence on the cash market.

The cash prices of certain commodities, such as cotton, are often based on a stipulated discount under a designated cotton future. Some have suggested that spot butter prices might be related by means of a specified schedule of discounts to the butter futures market. Further analysis of the relationship of the spot and futures markets appears desirable.

11/ Analysis of Open Contracts in Butter Futures on the Chicago Mercantile Exchange as of January 31, 1942. U.S.D.A. C.E.A. 9 pp. (March 1942.)

BUTTER PRICE QUOTATIONS

Under the present butter-marketing system, the creamery depends on a daily market quotation to use as a basis for selling butter. Receivers are likewise dependent on a daily price quotation for use in buying butter from creameries and also for selling butter to their customers.

The exchanges issue no price quotations themselves. It is necessary that, by some means, the activity which takes place on the exchanges be interpreted and that the interpretation of this trading be publicly posted. This function is performed by private market reporters, and by market reporters of the USDA Market News Service, who observe and report trading on the mercantile exchanges as one phase of their reporting of daily wholesale selling prices for butter.

The manner in which the offering, bidding, buying, and selling which take place on the exchanges is translated into the quotations issued by the commercial reporter, and also the manner in which the wholesale selling prices reported by the USDA Market News Service are arrived at are important aspects of the butter price system.

The Commercial Quotations

The Urner-Barry Publishing Company issues daily price quotations for the New York butter market and the Aberdeen Press issues daily price quotations for the Chicago butter market. Both concerns are privately owned market reporting agencies and they quote daily prices for other commodities including eggs, poultry, cheese, fresh fruits, and vegetables, as well as butter. The Urner-Barry market report is entitled "The Producers' Price Current," the Aberdeen Press daily report is entitled "Chicago Price Current." Both agencies indicate that their price quotations merely represent their judgment of the market. The price quotations issued by these two agencies are used very widely by the trade as the basis for buying and selling butter and are referred to by the trade as "the market." The Urner-Barry Company includes a statement on its daily reports to the effect that its butter prices are based exclusively on trading on the New York Mercantile Exchange. The Aberdeen Press carries a statement on the masthead of its daily report indicating that prices reported are indicative of the Chicago market trend until 10:30 a.m. The butter prices reported in Chicago Price Current are based exclusively on exchange trading.

Butter prices reported in Chicago Price Current for Chicago and Producers Price Current for New York are based on bids to buy, offers to sell, and sales on the mercantile exchanges. Occasionally, no bids or offers are made and no butter is sold on the exchange. In such cases prices which prevailed for the previous day are usually reported unchanged, the reporter inferring that the trade is generally satisfied with existing values.

Sales provide a better basis for quoting a price than do bids or offers. Unfilled bids to buy or uncovered offers to sell may at times provide a reasonable basis for reporting prices. Unfilled bids theoretically indicate the maximum price at which buyers are willing to buy on the exchange, and provide a floor at which butter could have been sold if anyone had been willing to sell that cheaply. If the bid serves to establish the "market" for the day the price so established (the quotation) is related by a more or less rigid system of premiums to the price at which settlement will be made during the day on millions of pounds of butter. Likewise, uncovered offers indicate the minimum price at which sellers are willing to sell butter on the exchange, and indicate a ceiling which no buyer was willing to pay to complete a transaction. An uncovered offer if it serves to establish the market will then be directly related to the price at which large quantities of butter will be sold. When bids and offers fall within a narrow range, it indicates general agreement as to value. A wide range, between bids and offers, indicates disagreement as to value or rapid change in sentiment during the trading session.

In interpreting the significance of bids and offers, the reporter must consider them in light of the previous day's market. For instance, an unfilled bid to buy provides the basis for raising the market since it is assurance that a transaction at a higher price could be completed. But, it would not provide the basis for lowering the market, since an offer to sell at a lower price would be needed to establish the likelihood of a sale at a lower price. Likewise, while an uncovered offer provides the basis for lowering the market, it would not provide basis for raising the market over the previous day's quotation.

The Urner-Barry and the Chicago Price Current reporters must exercise considerable judgment in interpreting the significance of bids, offers, and sales in issuing their quotations for the day.

After observing the trading in spot butter which takes place between 10:15 and 10:30 a.m. on the New York Mercantile Exchange, the Urner-Barry representative determines what his quotations for the day will be and posts them on a space provided for the purpose at the mercantile exchange. The Chicago Price Current quotations are likewise posted on a board at the Chicago Mercantile Exchange shortly after the close of the trading session at 10:00 a.m.

Example of How Quotations are Established

Table 1 shows the offers, bids, and sales made on March 31 and April 2, 1952, on the Chicago Mercantile Exchange and the quotations which were published in Chicago Price Current for those days. By following individual transactions it is possible to get some idea of the nature of the offering and bidding which takes place on the spot call. Generally, offers and bids appear to be made in such a manner as to facilitate the job of the commercial reporter.

On March 31 bids for 93 score butter of 68 1/2, 68 3/4, and 69 cents by brokers A, B, and C attracted no sellers. Offers at 69 1/2 and 69 1/4 cents by broker D attracted no buyers. Then 100 boxes were offered by broker D

Table 1.--Trading in spot butter, Chicago Mercantile
Exchange, March 31 and April 2, 1952

Offerer: or seller	Amount offered	Score	Offering price	Bidder: or buyer	Amount bid for	Score	Bid price	Sell- ing price	Chicago Price Current Quotation
			Cents				Cents	Cents	Score Price
									(March 28)
									93 69 1/4
									92 69 1/4
									90 cars 68 1/2
									90 LCL 67 1/2
									89 cars 67 1/2
									89 LCL 67
									(March 31)
									93 69 1/2
									92 69
									90 cars 69
									90 LCL 68
									89 cars 68
									89 LCL 67 1/2
									(April 1)
									93 69
									92 68 3/4
									90 cars 68 3/4
									90 LCL 67 3/4
									89 cars 67 3/4
									89 LCL 67 1/4
									(April 2)
									93 69
									92 68 3/4
									90 car 68 3/4
									90 LCL 67 3/4
									89 cars 67 3/4
									89 LCL 67 1/4
									(Wednesday April 2, 1952)
									93 68 1/2
									90 69
									90 68 1/2
									90 67 1/2

Arrows indicate basis for prices which were quoted.

at 69 cents. This offer matched in part a previous bid of broker C and therefore resulted in a sale. The 300 boxes offered at 69 1/4 cents by broker D were bought by broker C, and the 300 boxes offered by broker D at 69 1/2 cents were bought by broker C. This concluded the trading in 93 score butter and provided the basis for the Chicago Price Current report quoting the 93 score market at 69 1/2 cents.

Bids of 68 and 68 1/4 cents for 92 score butter by brokers A and B, respectively, attracted no sellers. Broker D then offered 100 boxes of 92 score at 68 3/4 cents, and this offer was accepted by broker B, who had a bid on the board at 1/2 cent less than the figure at which he bought. Broker E bid 69 cents for 100 boxes of 92 score butter but found no sellers. This concluded the trading in 92 score butter and the bid at 69 cents provided the basis for the commercial reporter quoting the 92 score market at 69 cents.

A bid by broker A for one carload of 90 score butter at 68 cents attracted no sellers, and bids by broker B for one carload of 90 score butter at 68 1/4, 68 3/4, and 69 cents attracted no sellers. The 90 score carlot market was quoted at 69 cents on the basis of the unfilled bid at 69 cents. No trading took place in less-than-carload lots (l.c.l.) of 90 score butter and the commercial reporter quoted the l.c.l. market for 90 score at 1 cent below the carlot quotation, the differential which had prevailed for the last 7 days.

Broker F bid 68 cents for 300 boxes of 89 score butter. This was the only trading which took place for 89 score butter. The commercial reporter quoted the 89 score carlot market at 68 cents and the l.c.l. market for 89 score butter at 1/2 cent less, the differential which had prevailed for the last 20 days.

On April 2 no sales were made on the exchange. Broker A bid 68 1/2 cents for 300 boxes of 93 score butter. The Chicago Price Current reporter quoted the 93 score market at 69 cents, the previous day's quotation for 93 score butter. No offers or bids were made for 92 score and the price was quoted unchanged from the previous day. Broker G bid 68 1/2 cents for one carload of 90 score butter, but this bid was unfilled. The commercial reporter quoted the 90 score carlot market at 68 3/4 cents, the previous day's quotation. Broker H bid 67 1/2 cents for 50 boxes of 90 score butter. The commercial reporter quoted the 90 score l.c.l. market at 67 3/4 cents, unchanged from the previous day. There was no trading in 89 score butter and the quotations for 89 score butter were unchanged from the previous day.

USDA Market News Reports

The U. S. Department of Agriculture reports wholesale selling prices for butter at Chicago and New York as well as at Philadelphia, San Francisco, Los Angeles, and Seattle. Although followed by the trade, these reports are used only infrequently as a basis for buying or selling butter, since the established custom of the trade is to use the commercial quotations for settlement purposes. Also, the fact that the commercial quotations are available earlier in the day than are the prices reported by USDA makes them more suitable for use as a pricing base during the day. The USDA market

reporter each day talks with buyers and sellers in the market and obtains information as to prices at which butter has been bought or sold, as well as certain other information. In Chicago and New York he also observes and reports the trading on the spot butter call of the mercantile exchanges. The following statement issued by the Dairy and Poultry Market News Service describes the nature of the transactions which form the basis for reporting wholesale selling prices:

"Wholesale prices reported for butter, cheese, eggs, live and dressed poultry are intended to reflect local prevailing values of goods of different grades and classes sold in volume in the open market by receivers. This type of transaction involves sales in quantity for cash or short-time credit to jobbers, chainstores, and other buyers. Wholesale prices reported reflect actual sales as found by the market reporters, of the Market News Division, who personally interview buyers and sellers and obtain information from them regarding quantities sold or bought, grades, and prices. They apply to sales of quantities which, according to local custom, constitute wholesale business. As reported by the Department, they include not only open-market sales but also sales at the wholesale trading level which for any one of several reasons may be made at a markup over some recognized published quotation used as a base."

After observing trading on the mercantile exchange, the USDA reporter obtains information from buyers and sellers in the market concerning market conditions and prices at which butter is being bought and sold at wholesale. Such information is obtained until about 2 o'clock in the afternoon, by which time most of the day's transactions have taken place. The USDA reporter then prepares a daily market report in which he lists wholesale selling prices of butter and other dairy and poultry products. This report is available at about 2:30 p.m. This daily report also includes information as to receipts, storage holdings, movement of butter into retail channels (weekly), production (weekly), and certain other statistical information on dairy and poultry products. The daily reports for Chicago and New York are mailed to a large number of firms and individuals, and the market news contained in them is reported by newspapers and radio stations throughout the country.

USDA market reporters report ranges in price, when found. Urner-Barry reports ranges, but much less frequently than does USDA. Chicago Price Current very rarely reports ranges. The trade prefers a single price rather than a range for settlement and contract purposes.

Wholesale selling prices reported by USDA are generally higher than the commercial quotation. (See tables 15, 16, and 17.) This is explained by the fact that sales of wholesale bulk butter, of the type reported by USDA, which include both open market and contract sales, are generally made at markup from 1/4 to 1/2 cent over the commercial quotation. 12/

12/ With respect to the wholesale markup, butter receivers indicated that the normal wholesale markup was 1/4 to 1/2 cent per pound on sales of wholesale bulk butter but that certain "marks" moved at as much as a cent over the quotation and certain less desirable "marks" moved at the quotation or only a very slight markup over it.

The low of the range of prices reported by USDA is often the same as the commercial quotation, inasmuch as the USDA market reporter reports exchange trading as well as "street" trading. A sale on the exchange frequently appears as the low of the USDA range.

Chicago Price Current, as well as reporting prices for less-than-carload lots of 93, 92, 90, and 89 score butter, reports a separate price for carlots of 90 and 89 score butter. Neither USDA nor Urner-Barry carry a separate grade classification for carload lots of 90 or 89 score butter.

Problems the USDA faces in Reporting Wholesale Selling Prices

In many respects the USDA market reporter faces a more difficult task in reporting wholesale selling prices of butter than does the commercial reporter who reports trading on the spot market of the mercantile exchange, for the following reasons:

1. The terms of transactions on the mercantile exchanges are clearly specified, whereas open-market transactions covered by the USDA market reporter show a greater diversity of terms.
2. Because of the general trade practice of basing sales on the Urner-Barry or Chicago Price Current quotations, the USDA tends to get information which is dominated by the commercial quotation. The trade uses the commercial quotations so generally there is a tendency for receivers not to report transactions which vary markedly from the commercial quotation and which might cause confusion as to what the "price" of butter is.
3. Complete information as to factors such as grade, size of transaction, credit terms, and other factors influencing price is sometimes difficult to obtain.
4. The reporter must evaluate his sources of information and necessarily has to depend on the sources whose information he considers reliable.

Distinctions Between Prices Reported by USDA and Commercial Butter Quotations

There are several important distinctions between the wholesale selling prices reported by USDA and the quotations issued by the commercial reporters, as follows:

1. The commercial quotations are based exclusively on trading on the mercantile exchanges, whereas the wholesale selling prices reported by USDA reflect wholesale transactions between dealers in the open market. Exchange transactions are only one of several types of transactions reflected in the prices reported by USDA.

2. Trading on the spot butter markets of the exchanges takes place at a specified time each morning on the floor of the exchange and lasts for 15 minutes in New York and 30 minutes at Chicago. On the other hand, open-market wholesale transactions between dealers take place throughout the day, and at many different places within the cities of Chicago or New York. The commercial quotations are available immediately after the close of the spot butter call in the morning, whereas the wholesale selling prices reported by USDA are not available until the middle of the afternoon.
3. The commercial quotations are used widely as a basis for buying and selling butter, whereas the prices reported by USDA are used only infrequently for contractual or settlement purposes.

BUYING AND SELLING PRACTICES OF WHOLESALE BUTTER RECEIVERS

In order to understand and appraise the manner in which spot butter prices are established, it appeared desirable to obtain certain information with respect to butter marketing practices, particularly with respect to the following points:

1. The proportion of butter which is marketed in such a manner that it tends to move directly from the creamery into distributive channels without passing through the central wholesale markets.
2. The extent of open-market trading between dealers in wholesale bulk butter.
3. The extent to which butter is sold on the basis of fixed markups over quotations as compared with transactions which involve some haggling between buyer and seller as to price.
4. The extent to which butter is sold to regular outlets week after week.
5. When and why receivers use the spot butter boards of the New York and Chicago mercantile exchanges.
6. The extent to which published quotations are used in buying and selling butter.
7. The relative importance of the following major types of primary receivers in the distribution of butter: Central market wholesalers, chainstores, meatpackers, dairy marketing cooperatives, and large dairy corporations.

It was felt that this information would contribute to a better understanding of the nature of wholesale trading on the open market and on the mercantile exchanges.

In order to obtain this information the major primary receivers of butter were asked to provide certain information concerning their buying and selling practices. Information was obtained directly from 9 wholesalers 13/

13/ Two major wholesalers in the Chicago market and 3 wholesalers in the New York market were unwilling to supply some of the information requested. Rough estimates concerning certain buying and selling practices of the 2 non-cooperating wholesalers in the Chicago market were made on the basis of information obtained from several different sources in the market, and such estimates were included in the sample. The sample, therefore, includes information concerning 11 wholesalers.

in the New York or Chicago markets, 6 large dairy corporations, 4 meatpackers, 4 marketing cooperatives, and 3 chainstores.

Marketing agencies for which information was obtained sold approximately 870 million pounds of butter during 1951. However, approximately 15 percent of this amount represented inter-dealer transactions. If inter-dealer transactions are deducted, agencies for which information was obtained acted as the primary receivers of 720 million pounds of butter. Production of creamery butter in 1951 was 1,200 million pounds. Approximately, 25 percent of creamery butter produced is sold locally by creameries, 14/ leaving total production of butter available for shipping equal to approximately 900 million pounds. Receivers from whom information was obtained handled, therefore, approximately 80 percent of total shipped butter in the United States. Table 2 shows the relative volume of butter handled by the various types of receivers.

Procurement of Butter

Information as to procurement was obtained in order to indicate the extent to which major receivers of butter depend on creameries as sources of supply and the extent to which they obtain butter on the open market from other distributors or other sources. Transactions between receivers and creameries are largely of a nature which do not lend themselves to daily price reporting.

Procurement of bulk butter from other wholesalers or distributors would be indicative of a wholesale-type transaction. It is this type of open-market transaction which forms the basis for much of the wholesale price reporting which is done. It is the type of trading which generally involves some bargaining between buyer and seller independent of the quotation as to price and it probably gives the dealers the best "feel" as to market conditions. Students of butter marketing have stressed the point that a great many of the problems of butter price reporting and quoting stem from the fact that in recent years the volume of wholesale trading between dealers has declined drastically, leaving a very "thin" basis for determining values. 15/

Although a number of statements have been made concerning the significance of the declining volume of open-market trading, little or no quantitative information for the postwar period exists on the matter. The information obtained from receivers as to sources and disposition of supplies was obtained primarily to show the relative volume of butter procured directly from creameries in contrast to the volume procured on the open market, and also to indicate the relative volume of butter sold as wholesale

14/ See p. 42 of the source cited in footnote 2, p. 3.

15/ See sources cited in footnote 2, p. 3, footnotes 6 and 7, p. 5; also, Sprague, Gordon W. Butter Price Quotations at Chicago (unpublished thesis, University of Minnesota). 141 pp., March 1940; and Mathis, A. G., and Hirsch, D. E. Butter Pricing at Iowa Creameries. FCA, USDA. 38 pp. May 1950.

Table 2.—Relative volume of butter received directly from creameries by major primary receivers of butter, by type of receiver, 1951 ^{1/}

Type of receiver	: Estimated : volume of : butter received: : directly from : creameries 2/	: Percentage : direct : receipts : are of total : receipts : of major receivers	: Proportion : direct receipts : are of total : direct receipts : of major receivers
	<u>Million pounds</u>	<u>Percent</u>	<u>Percent</u>
Wholesalers - - - - -	157	80	22
Large dairy corporations-	175	83	24
Meatpackers - - - - -	168	95	23
Marketing cooperatives -	106	91	15
Chainstores - - - - -	116	68	16
Total or weighted average	722	83	100

^{1/} Adapted from information obtained concerning the operations of 11 New York and Chicago wholesalers, 6 large dairy corporations, 4 meatpackers, 4 marketing cooperatives, and 3 chain stores. In most cases, information was obtained directly from receivers; however, in the case of 2 receivers unwilling to disclose their volume of sales, estimates were based on information obtained from other sources. No information was obtained from receivers whose business was confined to the West coast.

^{2/} Includes purchases of butter directly from creameries, butter obtained from receiver-owned creameries, and receipts from member creameries in the case of marketing cooperatives.

bulk butter in contrast to sales of a nature that would tend to bypass the wholesale level of trade.

Of the 868 million pounds of butter purchased during 1951 by the receivers interviewed, 23 percent was obtained directly from creameries owned or operated by the receiver, 12 percent was obtained directly from member creameries of marketing cooperatives, 48 percent was obtained directly from other creameries, and 16 percent was obtained from wholesalers or other distributors. Less than 1 percent of the supplies was obtained on the spot butter boards of the Chicago or New York mercantile exchanges. In other words about 17 percent of the butter procured by receivers was procured through what might be described as wholesale channels.

Table 3 shows the sources from which butter was obtained by the different types of receivers. The large dairy corporations obtained 52 percent

Table 3.—Approximate proportions of butter obtained by major receivers from various sources, by type of receiver, 1951

Type of receiver	Proportion obtained directly from—				Proportion : obtained		On the spot	
	: Creameries		: Member		: Total		: of the Chicago	
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
New York wholesalers - - -	-	-	-	59	59	39	2	2
Chicago wholesalers - - -	-	-	-	89	89	9	2	2
Large dairy corporations -	52	-	-	31	83	16	1	1
Meatpackers - - - - -	47	-	-	48	95	4	*	*
Marketing cooperatives - -	-	91	-	-	91	8	1	1
Chainstores - - - - -	5	-	-	63	73	32	0	0
Weighted average, all receivers - - - - -	23	12	48	83	16	1		

* Less than 0.5 percent.

of their supplies from creameries they owned, and the meatpackers 47 percent from their own creameries. The marketing cooperatives obtained nearly all (91 percent) of their supplies directly from member creameries. New York wholesalers obtained a relatively large proportion (39 percent) of their supplies from other distributors, whereas Chicago wholesalers as a group obtained a large proportion of their supplies direct from creameries. The Chicago wholesalers obtained only about 9 percent of their supplies from other dealers. This indicates that there is considerably more open-market trading between dealers in New York than there is in Chicago, and, therefore, a broader basis for wholesale price reporting by the USDA Market News Service in New York than in Chicago. The volume of trading on the spot butter board of the New York mercantile exchange is approximately the same as that on the Chicago mercantile exchange. The basis for establishing the commercial quotations in New York is probably no broader than that in Chicago.

Disposition of Butter

Information as to disposition of butter indicated the proportion which enters directly into the wholesale level of trading and the proportion which moves into distribution at points farther along the channels of distribution, or is marketed by an integrated buying and selling organization which has its own distributive outlets for butter. This matter is important because it indicates the volume of butter which is sold in such a way that it bypasses the wholesale level of trade, generally in such a manner that no independent judgment as to value is expressed. Conversely, it indicates roughly the volume of wholesale selling available for wholesale price reporting purposes.

The survey indicated that roughly 12 percent of the butter sold by the receivers interviewed was sold in bulk to wholesalers, large chainstores, meatpackers, and large dairy corporations, 45 percent through receivers' own distributive outlets, 7 percent in prints to chainstores, meatpackers, and large dairy corporations, 30 percent to retailers and institutional users, 5 percent to jobbers, and about 1 percent on the spot butter boards of the Chicago or New York mercantile exchanges. About 85 percent of the butter distributed by agencies from whom information was obtained was marketed in such a way that it did not directly enter the wholesale level of trade.

Table 4 shows the proportions of butter sold to various types of outlets by the various types of primary receivers. It is notable that the New York wholesalers, who were relatively heavy open-market buyers, were equally heavy open-market sellers of wholesale bulk butter. Two of the marketing cooperatives sold sizable quantities of wholesale bulk butter. Many of these sales were sales to regular customers and not characteristic of wholesale transactions where some bargaining as to price between buyer and seller exists, and where judgment as to value independent of the quotation is expressed. Certain of the large dairy corporations are at times relatively heavy open-market sellers. The chainstores and the meatpackers sold very little wholesale bulk butter on the open market.

Table 4.---Approximate proportions of butter sold by major receivers to various outlets, by type of receiver, 1951

Type of receiver	Percentage of butter sales--						
	In bulk to : wholesalers, chainstores, meatpackers, large dairy corporations, or marketing cooperatives :	In prints to : wholesalers, chainstores, meatpackers, large dairy corporations, or marketing cooperatives :	Through own distributive outlets :	To jobbers :	To small chainstores, retailers, or institutional users :	On spot butter board of Chicago or New York mercantile exchanges :	Percent
New York wholesalers - - -	35	3	-	25	36	1	29
Chicago wholesalers - - -	24	4	-	5	65	2	
Large dairy corporations -	16	12	26	3	42	1	
Meatpackers - - - - -	4	-	96	-	-	*	
Marketing cooperatives - -	11	25	-	14	50	*	
Chainstores - - - - -	1	-	99	-	-	-	
Weighted average - - - -	12	7	45	5	30	1	

* Less than 0.5 percent.

Purchases and Sales at Fixed Differentials to the Quotation
and Open-Market Transactions

In order to get further information on the nature of buying and selling practices which were directly related to the problem of wholesale price determination, information was obtained on how much butter was bought on the basis of a fixed and previously agreed on differential relative to a quotation and how much was bought on the basis of some bargaining as to price. The same type of information was obtained with respect to sales. This information sheds further light on the questions of what proportion of the butter is marketed in such a manner that independent judgment is exercised as to what butter is worth, and how much is priced more or less automatically on the basis of the quotation plus a fixed markup. For price-reporting purposes, only the former type of transaction provides information as to changes in the price of butter other than changes which are reflected in the commercial quotations. Furthermore, it would appear that the larger the volume of open-market trading the better able those who trade on the mercantile exchanges would be to sense changes in actual supply-demand conditions and to adjust prices accordingly.

About 50 percent of the butter procured by the receivers interviewed was bought on the basis of a fixed and previously agreed on differential relative to the quotation, 35 percent was handled on the basis of intra-company transactions, and about 15 percent was bought on the basis of some bargaining as to price which was independent of the quotation. Table 5 shows the basis on which supplies were bought by various types of receivers.

On the selling side, receivers sold 90 percent of their supplies on the basis of a fixed differential relative to the quotation, and 10 percent on the basis of some bargaining as to price. Table 5 shows a breakdown, by various types of receivers of selling arrangements.

These data indicate the dependence which receivers place on the quotation as a measure of value, both for buying and selling butter. The data also support the findings of other workers to the effect that the volume of open-market trading in wholesale bulk butter is relatively limited.

Proportion of Butter Sold to Regular Outlets

A measure of the proportion of supplies of butter which are available for wholesale trading is the extent to which supplies of butter are committed to a regular trade. The chainstores, for instance, adjust their procurement very closely with the demands of their retail outlets, and nearly all the butter they procure is purchased for the purpose of supplying their own retail outlets. Likewise, other types of receivers with their own distributive outlets find themselves in the position of having nearly all the butter they procure earmarked for distribution. Many receivers, including central market wholesalers, who do not have their own distributive outlets have found it desirable to build their businesses about a regular

trade and tend to earmark a large proportion of their receipts to regular customers. A large proportion of this butter is sold as print butter. The wholesaling of bulk butter is incidental and generally considered to be the least profitable part of the business.

Of the butter handled by the receivers interviewed, 88 percent was considered to be committed in advance for distribution to regular outlets. 16/ Table 6 shows the proportion of supplies committed in advance to regular outlets by the various types of receivers.

Proportion of Butter Sold as Print Butter

An indication of the quantity of butter available for wholesale trading is the quantity which is sold as bulk butter in contrast to that sold as print butter. Print butter, because of its nature, does not enter into wholesale trading and is not traded on the mercantile exchanges. Ordinarily the output of the print room is geared to commitments and little print butter is stored. Nearly all print butter is sold on the basis of contract sales. The price at which print butter is sold is not considered in reporting wholesale selling prices.

Approximately 79 percent of the butter marketed by receivers included in the sample was sold as print butter. (Table 6.)

Use Of Published Quotations as a Basis for Buying and Selling

Receivers were asked what regularly published quotation they used as a basis for buying and selling. All New York receivers and nearly all receivers shipping supplies to eastern markets used the quotations published by Urner-Barry in Producers Price Current both as a selling and buying base. Midwestern receivers generally used the quotation published in Chicago Price Current on butter sold in the Midwest and the Urner-Barry quotation if the butter was sold in the East. Most of the large receivers bought and sold some supplies on the basis of each of the commercial quotations.

One of the marketing cooperatives sold a large proportion of its supplies on the basis of the USDA daily market report for New York. Several Midwestern receivers indicated that occasionally they sold some butter on the basis of the USDA daily market report for Chicago because they believed they were able to get a higher net price for their butter by doing so.

16/ The fact that the butter was considered committed in advance to regular outlets does not mean that the receiver sold exactly that proportion to regular outlets, owing to the fact that it is not possible for a receiver to gage exactly the requirements of his regular trade.

Table 6.—Proportions of butter sold by major primary receivers as print butter, and butter committed in advance for distribution to regular outlets, by type of receiver, 1951

Type of receiver	:Percentage of butter—	
	: Sold as	: Considered committed
	: print butter	: in advance
	: to regular outlets 1/	
	<u>Percent</u>	<u>Percent</u>
New York wholesalers - - - - -	52	54
Chicago wholesalers - - - - -	54	70
Large dairy corporations - - - -	70	88
Meatpackers - - - - -	95	100
Marketing cooperatives - - - - -	87	95
Chainstores - - - - -	99	100
Weighted average - - - - -	79	88

1/ Regular outlets were defined to include: (1) Regular customers whose orders are expected; (2) storage for anticipated demands of regular customers; and (3) seasonal customers whose orders are expected at certain times of the year.

Nature of Trading on the Spot Butter Boards

Use of the spot butter boards as a market place

Receivers were asked whether they traded on the spot butter boards of the mercantile exchanges and, if so, how often. All receivers interviewed, with the exception of the chainstores, one small Chicago wholesaler, and two marketing cooperatives, indicated that at times they bought or sold butter on the spot butter board of the Chicago or New York mercantile exchanges. The wholesalers in both Chicago and New York indicated they traded regularly on the spot butter board. Four of the six large dairy corporations interviewed indicated that they frequently bought or sold butter on the spot butter boards of the mercantile exchanges. Two of the marketing cooperatives said they traded on the spot butter boards.

Receivers were asked whether the spot butter boards of the mercantile exchanges served as a suitable source for obtaining supplies of butter or as a suitable outlet for butter. This question was asked primarily for the

purpose of establishing whether or not the exchanges actually serve a function as a market place. Of the 26 receivers interviewed, 25 indicated that the exchanges did not serve as a suitable source of supplies or as a suitable outlet for butter. Many receivers indicated that, on occasion, they did buy supplies on the board when butter was unavailable on the open market and that they did use the spot butter boards occasionally as an outlet for surplus butter. However, such transactions were almost always made for the purpose of "adjusting values" rather than for the purpose of actually buying or selling butter.

Why the spot butter boards are considered not to be satisfactory places to buy or sell butter

The following reasons were given as to why the spot butter boards are not considered satisfactory sources of or outlets for supplies:

1. Buying or selling on the spot board has too much effect on price.
2. General payment of premiums makes it impossible to sell butter profitably on the spot boards in quantity except on a declining market. For this reason very little butter is offered for sale on the spot board and large quantities of butter are just not available for purchase there.
3. Specifications given for butter traded on the exchange do not give sufficient detail concerning certain characteristics of butter which are not adequately reflected by grade. Most important of these are color, salt, and storability.
4. It often is inconvenient (especially if the receiver is not located in Chicago or New York) to move butter into Chicago or New York for sale on the exchange, and is often inconvenient for some receivers to take delivery on butter at Chicago or New York.
5. It is generally easier and cheaper to buy or sell on the open market or to buy direct from creameries.
6. Procurement of bulk of supplies has already been arranged, and most of the butter procured is committed in advance to a regular trade.
7. Desire not to be directly associated with activities which are concerned with the process of price establishment.

The answers above explain why the volume of exchange trading is as limited as it is; also, the answers indicate the problems involved in attempting to increase the volume of exchange trading and thereby to widen the base on which the commercial quotations are established. However, the answers also point to certain changes in exchange rules which might tend to encourage dealers to use the exchange in balancing supplies.

Why the volume of exchange trading is limited

Under the current system of marketing butter it is unreasonable to expect the mercantile exchanges to do more than serve as a supplemental source of supplies or as a supplemental outlet for supplies. At the present time, however, the open market is generally used by receivers as the source of supplementary supplies or as the outlet for surpluses, rather than the mercantile exchanges.

Why do receivers prefer to trade on the open market rather than on the spot butter boards of the mercantile exchanges? The answer to this question is significant inasmuch as the principal hope of increasing the volume of trading on the spot butter markets lies in making them function as market places for open trading between dealers.

A large proportion of the butter distributed is purchased by receivers directly from creameries and is earmarked for distribution to a more or less regular trade. Premiums over the quotation are often paid to creameries. Such premiums can be paid only if the receiver has established outlets which will enable him to recover the premiums and sell the butter profitably. The wholesale open market is not ordinarily such an outlet—neither is the exchange. The exchange is an even less desirable outlet than is the open market because costs incurred in receiving and handling bulk butter are not ordinarily recoverable on the sales made on the exchange, whereas such costs usually are recoverable on open-market sales.

Trading on the exchange forms the basis for establishing the quotations, yet, because of the thinness of the market, purchase or sale of sizable quantities of butter on the exchange tends to have an exaggerated effect on price. An interesting aspect of this point was brought out by several receivers. Since a great deal of butter is purchased at the quotation plus a markup, and since butter purchased on the spot call is purchased at a price which many times establishes the quotation, the spot board represents a source where supplies may be procured at the quotation and, in a sense, it represents a cheaper source of supplies relative to the quotation than does the open market or direct procurement. However, any attempt to buy supplies of butter in quantity on the spot call has a tendency to force the market up, unless other dealers are willing to sell as much butter to the dealer bidding for supplies as he wants. Since the exchange generally represents an unprofitable outlet for supplies, those dealers who sell on the spot call to keep the market from advancing are forced to sell at a loss. Several receivers indicated that for this reason they considered it unethical for a dealer to attempt to procure sizable quantities of butter on the exchange.

Although Chicago and New York are the most important wholesale butter markets, a number of important receivers of butter concentrate supplies of butter obtained from creameries at various concentration points in the butter-producing areas such as Mason City and Dubuque, Iowa; Minneapolis and St. Paul, Minn.; Omaha, Nebr.; and Kansas City, Kans. Butter is shipped directly from such locations to buyers throughout the country, or the butter may be placed in storage at such concentration centers and shipped at a

later date. Many large receivers indicated that, even though they have distributive outlets in Chicago and New York to service a regular trade, they find it inconvenient and uneconomical to divert uncommitted supplies of butter to Chicago or New York in order to offer it on the exchange, and they may find it inconvenient to dispose of butter purchased on the exchange. Certain receivers who concentrate supplies at points other than Chicago said that they cannot conveniently use the exchange as an outlet for distress butter because of difficulties and time involved in getting the butter into Chicago to offer it on the exchange. They pointed out that since market conditions change from day to day, they might want to offer butter which they have at a country point or en route for sale on the exchange on a particular day, but they might not want to offer it by the time it arrived in Chicago or New York.

A reason given as to why the exchange is not a suitable source of supplementary supplies (even assuming a large volume of offerings) is that, although butter sold on the exchange is inspected by USDA graders, such butter is not available to the buyer for inspection prior to purchase. Some receivers indicated that they require butter having certain characteristics not reflected by grade in order to supply their customers with the types of butter they want. These factors include principally salt, color, and storability.

Dr. Gordon Sprague 17/ in his study of the Chicago butter market pointed out that receivers tend to offer their least desirable butter within a given grade on the spot call, and for this reason the exchange was a less desirable source of butter. Interviews with Federal graders who grade butter on the exchange and with certain receivers indicated that this point would be difficult to substantiate, although it is logical to expect receivers to sell their most desirable butter (within grade) to their regular outlets.

Costs of trading on the exchange were pointed to by certain receivers as being a deterrent to exchange trading relative to trading on the open market. Such costs as grading costs and brokerage fees and other costs are involved in exchange trading but, many times, are not involved in open-market transactions.

A reason given by several receivers as to why they did not trade on the spot butter boards of the mercantile exchanges was that they did not wish to become involved in transactions which might in any way implicate them as being directly engaged in establishing prices. One receiver said that his competitors had made charges that he was attempting to rig the market after he made purchases of butter on the spot call on 2 days in succession.

17/ Sprague, Gordon W. Butter Price Quotations at Chicago. (Unpublished thesis, University of Minnesota.) 141 pp. March 1940.

Function of the spot butter market in price making

Under the present system of buying and selling butter on the basis of central market quotations, a large number of buyers and sellers who rely on the quotation as a measure of value avoid taking part in any of the transactions on which the quotation is based. Obviously, however, it is necessary that, by some means or other, forces must be set in motion to adjust the quotation to changes in the supply of and demand for butter. At some point in the marketing process, buyers and sellers must depart from the practice of buying and selling on the basis of the quotation and make decisions as to what butter is worth. This is the crux of the problem of central market price establishment. The spot butter markets of the Chicago and New York mercantile exchanges provide the facilities for buyer and seller to meet and buy and sell butter for what they believe it to be worth and where the results of such trading will be publicly posted. A major function of these markets is the providing of facilities for the public posting of values, and a large proportion of the trading which takes place is for this purpose.

Why and when receivers trade on the exchange

Butter receivers were asked to describe why and when they used the spot butter markets. The receivers who were interviewed said that they traded on the spot butter market for the following purposes:

1. To adjust butter values to a point at which buyers are willing to buy and sellers are willing to sell.
2. To test the market.
3. To dispose of small surpluses when no other outlets are available.
4. To obtain a limited quantity of supplies when supplies are unavailable elsewhere.

Receivers generally indicated that when supplies of butter are moving freely through channels of distribution or into storage at a normal rate there is a tendency for little trading to take place on the exchange because such a situation indicates that prevailing values are in line with supply-demand conditions. However, when receivers find that supplies are not moving into distribution and stocks are accumulating, or, on the other hand, that their supplies are short and additional supplies are not generally available on the open market at the normal wholesale markup over the quotation, it is likely that there will be considerable trading on the exchange in an attempt to adjust values to the point that supply and demand are again in balance.

The following are examples of the types of situations which dealers said would lead them to offer to sell or to bid to buy butter on the exchange: When a dealer finds that his customers are cutting down on the

volume of their purchases and that he is accumulating more butter than he desires to hold at prevailing levels of price, he will probably attempt to sell the butter on the open market to other dealers at the normal wholesale markup of about 1/2 cent over the quotation. If he finds no takers he may attempt to sell his unwanted butter on the open market at 1/4 cent "over" or at the quotation. If he still is unable to sell his unwanted butter he may sense that the market is too high and may offer 50 boxes of butter for sale on the spot call the following day at the quotation or at a price under the previous day's quotation, in an attempt to get the market down to the point where he can sell butter to other dealers on the open market at the normal wholesale markup, and to his regular trade. In this respect he is motivated not only by the fact that he has surpluses which he has been unable to move at the market price plus normal markup but also by the fact that he has butter coming in daily from creameries which he is paying for on the basis of the quotation. If he finds that he cannot move supplies at the quotation plus normal markup, he is desirous of getting the quotation down in order not to have to pay creameries a price for butter which is higher than that at which he is able to move the butter profitably.

If, on the other hand, a receiver finds that his supplies from creameries are inadequate to meet the needs or anticipated needs of his regular trade, he may try to buy butter from other dealers. If he is unable to buy butter on the open market for the "normal" 1/2 cent over the quotation, but rather is asked to pay 3/4 of a cent or a cent "over" for "marks" of butter he can normally get for 1/2 cent "over" he may decide to go to the exchange the following day and place a bid to buy 50 boxes at yesterday's quotation, and if he gets no butter he may place another bid at 1/2 cent over yesterday's quotation. His interest in doing this is not so much the desire to buy butter on the exchange as to get the market to the point at which other dealers will sell to him at the normal markup of 1/2 cent per pound. Some receivers said that, at times when other dealers would not sell butter to them at the normal wholesale markup, they would "threaten" to go to the spot board the following day and raise the market if they could not obtain needed supplies at the normal wholesale markup.

With buying and selling transactions both based on the quotation, a large number of buyers and sellers of butter have, within limits, more interest in buying and selling margins than in the actual level of price. The following example illustrates the point: A receiver would prefer to pay 1/2 cent over a quotation of 70 1/2 cents than to pay 1 cent over a 70-cent quotation, although the net cost of the butter is the same in both cases. With the price for which he and his competitors sell butter based on the quotation, the receiver's interest lies in buying butter at a price as close to the quotation as possible. Of course, if a receiver anticipates a sharp increase in values he may be willing to buy supplies on the open market at a higher-than-normal markup over the quotation or, likewise, he may sell at less than the quotation if he anticipates a decline in values the following day.

Certain receivers indicated that they may, at times, use the spot butter board of the mercantile exchange for the purpose of "testing the market." Bids to buy at a price several cents under the previous day's quotation or offers to sell at several cents over the previous day's market might be testing actions.

The spot butter market is always available to receivers in the central markets as a place where butter may be sold when no other outlets are available, and as an emergency source of supplies. At times when the trade is uncertain as to market conditions, the spot butter boards provide the facilities through which values may be readjusted and surpluses marketed in a more orderly manner than if no exchange existed.

The Nature of Wholesale Trading

The information obtained from various butter receivers as to their buying and selling practices provides a good basis for describing the nature of wholesale or open-market trading.

First, the amount of trading of this type is limited. Approximately 10 to 15 percent of the butter which is marketed is sold as bulk butter on the wholesale open market.

A great deal of the open-market trading represents buying or selling by large distributors to balance supplies against requirements. A receiver may find that the amount of butter which he is currently receiving from the creameries which regularly supply him is an excess of his anticipated requirements, and may sell this surplus butter on the open market. On the other hand a receiver who, for instance, depends almost entirely on creameries as a source of butter may find that his creameries are not supplying him with enough butter to meet his requirements and in order to supply his regular trade the receiver may contact one or more large wholesalers and buy butter enough on the open market to fill out his requirements. Receivers may choose to set up their procurement program in such a manner that they will carry no butter in storage and plan in advance to purchase a certain proportion of their supplies on the open market during the out-of-storage season. Other receivers plan their procurement in such a manner that they agree to accept from regular shippers more butter than they have regular outlets for and plan to sell the "surplus" on the open market.

The open wholesale market is not used as a primary source of supplies by most receivers and for this reason it is not an outlet for large quantities of butter. It is a supplementary source of supplies and an outlet for supplies when no other outlet may be found. As butter is said to be the balance wheel of the dairy industry, so the wholesale butter market may be called the balance wheel of the butter business.

There are a limited number of wholesale receivers in the central markets who may be considered as regular sources of wholesale bulk butter. Most receivers, because of the integrated nature of their buying and selling operations, attempt to adjust their procurement very closely with demands

of their regular trade. They are not regular open-market sellers because they have established outlets for their supplies. Open-market sales on the part of many receivers are limited to occasional sales of surplus butter.

An important phase of wholesale trading relates to the handling of seasonal surpluses of butter which are produced during the late spring and early summer. Some receivers as a matter of policy store no butter, others may have no definite storage policy, and others may attempt to adjust their storage program closely with their anticipated requirements for storage butter during the short production season. Some receivers may store large quantities of butter speculatively at times when they "like the market."

Table 7 shows the storing practices, by type of receiver, of the receivers from which information was obtained. All receivers who stored butter in excess of estimated merchandising needs were wholesalers. One of the important functions performed by the wholesalers in the central markets is the storing of seasonal surpluses.

Table 7.—Storage practices of major primary receivers of butter, by type of receiver

Type of receiver	: Store more : butter than : required : to meet : merchan- : dising : needs	: Store to : meet all : or large : part of : estimated : merchan- : dising : needs	: Store to : meet part : of : estimated : merchan- : dising : needs	: Don't : store
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>
Wholesalers - - - - -	8	2	0	1
Large dairy corporations-	0	4	2	0
Meatpackers - - - - -	0	3	1	0
Marketing cooperatives -	0	4	0	0
Chainstores - - - - -	0	0	1	2
Total - - - - -	8	13	4	3

A considerable amount of the open-market trading which takes place is related to buying and selling of seasonal surpluses during the period of heavy production and to the obtaining of supplementary supplies of butter during the short production season by those receivers who have not stored enough butter to meet their merchandising needs. There appear to be certain times when the volume of open trading is greater than at other times: (1) Near the end of the in-storage season; (2) during the out-of-storage season at the time that production is increasing and is approaching the level of current consumption.

Near the end of the in-storage season dealers who attempt to adjust their storage holdings with their estimated merchandising needs may find that they are accumulating more butter than they wish to store or that their storage stocks are not as large as desired, in which case they may sell or buy in the open market in order to adjust their storage holdings to the desired level. In the spring when production is increasing and is again approximately equal to current demand, dealers may find that they still have storage stocks on hand which they desire to sell as soon as possible because they anticipate the usual seasonal decline in price. Such storage butter may be sold on the open market. Also, in the late winter and early spring receivers are not interested in putting any more butter in storage, so that unexpected changes in production or demand may result in considerable activity in the open market in order to move all the current make of butter into consumptive channels.

THE VOLUME OF TRADING ON WHICH QUOTATIONS ARE BASED

Volume of Trading on Chicago and New York Mercantile Exchanges

Contrary to the common impression that the volume of trading on the spot butter markets was much greater 30 years ago than that at the present time, the volume of sales of spot butter on the Chicago Mercantile Exchange relative to receipts of butter at Chicago has remained relatively constant since 1923, except for a period of 9 years in the 1930's and early 1940's when the Federal Government was stabilizing butter prices through purchases of butter on the exchange.

Sales of butter on the Chicago Mercantile Exchange reached a high of 3.8 percent of receipts of butter at Chicago in 1926 and a low of 0.8 percent of receipts in 1950. (Table 8.) In 1950, however, the Commodity Credit Corporation supported the price of milk and butterfat through purchases of butter and other manufactured dairy products. The milk and butterfat price-support program was probably a factor in the low volume of trading in 1950.

Sales of butter on the spot call of the New York Mercantile Exchange averaged 3.1 percent of market receipts of butter during the period 1947-51. (Table 9.)

Actually sales on the spot butter market relative to receipts of butter in the market do not present an adequate picture of the significance of exchange trading for two reasons:

1. Unfilled bids and uncovered offers are many times very realistic indications of market conditions.
2. A sizable proportion of the receipts at Chicago or New York are committed in advance for distribution to retailers or to integrated marketing organizations that have fixed requirements against a large proportion of the butter which they receive. In one sense such supplies bypass the wholesale market, so that relating such "already committed" butter to sales on the spot butter market is unrealistic. Also a sizable proportion of reported receipts may represent print butter which is not eligible for sale on the spot call under present trading rules.

An analysis of unfilled bids and uncovered offers on the spot call of the New York Mercantile Exchange indicated that during the years 1947, 1948, and 1951 unfilled bids were equal in volume to 5.0 percent of market receipts and that uncovered offers were 7.3 percent of market receipts. The volume of unfilled bids, uncovered offers, and sales combined during the period of 1947-1951 was 15.9 percent of market receipts. During 1951

Table 8.--Sales of butter on the spot call of Chicago Mercantile Exchange and receipts of butter at Chicago, 1923-51

Year	: Receipts of : butter : at Chicago	: Sales on : spot call	: Percentage sales : on spot call were : of receipts
	<u>1,000 pounds</u>	<u>1,000 pounds</u>	<u>Percent</u>
1923 - - - -	225,892	5,323	2.37
1924 - - - -	258,083	6,461	2.50
1925 - - - -	254,308	7,764	3.05
1926 - - - -	236,546	9,065	3.83
1927 - - - -	235,200	1/	-
1928 - - - -	230,514	3,155	1.40
1929 - - - -	244,632	2,005	0.82
1930 - - - -	233,638	2,200	0.94
1931 - - - -	243,695	3,185	1.31
1932 - - - -	223,428	4,155	1.86
1933 2/- - -	261,001	20,296	7.78
1934 2/- - -	228,241	16,510	7.23
1935 2/- - -	229,622	9,225	4.02
1936 2/- - -	225,435	6,876	3.05
1937 2/- - -	235,756	4,991	2.12
1938 2/- - -	304,589	69,903	22.95
1939 2/- - -	248,947	15,772	5.54
1940 2/- - -	252,647	8,988	3.56
1941 2/- - -	276,435	10,928	3.95
1942 - - - -	247,014	2,875	1.16
1943 - - - -	168,202	3/	-
1944 - - - -	147,304	3/	-
1945 - - - -	141,747	3/	-
1946 - - - -	4/ 97,648	4/ 1,005	4/ 2.06
1947 - - - -	147,194	3,649	2.48
1948 - - - -	140,326	4,031	2.87
1949 - - - -	178,606	3,351	1.88
1950 - - - -	168,587	1,411	0.84
1951 - - - -	156,333	3,838	2.45

1/ Not available.

2/ Federal Government was buying butter on the spot market to stabilize butter prices.

3/ Spot call suspended during period of OPA regulation.

4/ Last six months (OPA regulations in effect until June 30, 1946).

Sources: Sales data for 1923 through 1947 were based on information obtained by A. G. Mathis, USDA, from Chicago Mercantile Exchange, and from the Dairy and Poultry Yearbook. Receipts information and information as to sales on the spot call for the period 1948 through 1951 was obtained from reports of the Market News Service, Production and Marketing Administration.

it was estimated that about 10 percent of the open-market wholesale trading between dealers took place on the spot butter boards.

The point of view of many distributors as to the adequacy of the basis for quoting prices

Nearly every important distributor of butter who was interviewed felt that the method by which central market butter prices are arrived at was, by and large, satisfactory, and that the trading which took place on the mercantile exchanges provided a reasonable basis for quoting prices. Many receivers pointed to the limitations imposed by the "human element." "It is not perfect, but human beings being what they are, the system works as well as could be expected," was a type of comment which was made by a number of receivers. "No one has devised a better method," was another general comment which was frequently made.

Most dealers discussed at some length why they felt the volume of trading on the exchanges was adequate for establishing central market butter values in a satisfactory manner. The same points were made by many different distributors. A few distributors expressed a point of view in conflict with certain of the views expressed by the majority.

It was argued that values are determined on the basis of the willingness of receivers to buy or to sell. Receivers are in the position of buying and selling a very large proportion, if not all, of their supplies on the basis of the quotation, and as long as the quotation is at a level which is satisfactory to both buyer and seller it is not necessary for any trading to take place on the spot board. The price is considered to be at the right level because of the willingness of receivers and other distributors to buy and sell large volumes of butter at the quotation plus such premiums and trade markups as exist. However, when a lack of willingness to buy or to sell large quantities of butter on the basis of the existing quotation asserts itself, it is necessary for values to be

Table 9.--Sales of butter on the spot call of New York
Mercantile Exchange and receipts of butter at
New York, 1947-51

Year	Receipts of butter at New York	Sales on spot call	Percentage sales on spot call were of receipts
	1,000 pounds	1,000 pounds	Percent
1947 - - -	182,263	6,977	3.8
1948 - - -	168,189	7,797	4.6
1949 - - -	156,303	4,139	2.6
1950 - - -	149,342	3,081	2.1
1951 - - -	161,359	3,578	2.2
Total -	817,456	25,572	3.1

Compiled from daily market reports of the Market News Service,
Production and Marketing Administration.

adjusted to the point at which a willingness to buy and sell butter in large volumes reappears. This adjusting of values is done by offering butter or bidding for butter on the spot butter boards. Even this readjustment, it is argued, may be brought about without any butter being sold; an offer to sell or a bid to buy may provide the basis for necessary readjustments.

It was generally felt that the fact that the number of persons trading on the spot butter markets of the mercantile exchanges was very limited was no indictment against the spot butter markets. It was emphasized that any dealer, receiver, or creamery manager that does not like the present level of price may bid to buy butter or offer to sell butter on the spot boards for whatever price he thinks it is worth; also, in the same general connection, that anyone, in order to put values out of line with what others believe values to be, must be ready to buy or sell very substantial quantities of butter to back up his judgment as to value. A bid to buy 50 boxes of butter at $1/2$ cent over the previous day's quotation will not raise the market $1/2$ a cent unless other receivers and distributors also feel that the market should be raised $1/2$ a cent, are willing to pay their creameries $1/2$ cent per pound more for all butter which they receive, and feel that they can move butter into distribution or are willing to move it into storage at the higher price.

Also pointed out was the fact that although certain large buyers or sellers may not trade on the spot boards, the willingness or lack of willingness of such large buyers to buy, or large sellers to sell, in the open market was quickly reflected on the spot board. It was argued that numerous transactions involving numerous buyers and sellers are in effect brought to focus at one point-- the spot butter boards. In this light the spot butter boards were pictured as free and open markets very sensitive to the forces of supply and demand.

The reasoning above involves certain assumptions with respect to the number and nature of the buyers and sellers whose interests are brought to bear on exchange trading and the nature of the transactions which are negotiated on the exchanges. Certain limitations to the above more or less "stock" answers to criticisms of the smallness of the volume of trading on the exchanges is discussed under the heading "Effectiveness of Checks and Balances."

POSSIBILITIES OF MANIPULATION

It is often inferred that the spot butter markets are subject to manipulation. This inference appears to stem from various of the following generally known characteristics of the spot butter markets and of the butter price quotations which are arrived at on the basis of trading on the spot butter markets:

1. The volume of trading is small.
2. The number of traders is relatively small.
3. Prices have been noted to fluctuate at times rather severely from day to day and in what has appeared to be an irrational manner.
4. Premiums are frequently paid over the spot butter market quotations.

Obviously, it is undesirable that the spot butter markets be susceptible to rigging or manipulation. It is extremely difficult for a research worker to judge the extent to which the spot butter market may be manipulated. Exhaustive study of individual receiver's records might cast considerable light on the subject. However, even with complete access to receivers' records, judgment still must be made as to just where legitimate trade practice ends and manipulation begins. The word manipulation as used in this study is used in the sense of ability to control disproportionately or influence the market. The ethics of the matter is irrelevant to this analysis.

Dr. J. C. Huttar in a recent article 18/ points to the difficulties in drawing the line between legitimate trade practice and manipulation.

Checks and Balances Which Limit Manipulation

Prices may get out of line with supply-demand conditions because of lack of adequate information as to actual supply-demand conditions, or they may be forced out of line temporarily because of actions of individuals which are taken for the purpose of influencing the market to their advantage. Such actions may or may not actually result in price maledjustment. Actions taken in a receiver's self-interest are thought of as manipulation only if the receiver is successful in actually putting the market out of line with supply-demand conditions. If he is unsuccessful in influencing the market to his advantage, or if the "selfish" action results in correcting values to the point where the forces of supply and demand are again in balance the same action may be looked upon not as manipulation but merely an expression of the interplay of competitive forces. In other words it may be argued that

18/ "Who is Rigging the Egg Market." Poultry Digest Vol. 11 No. 122. April 1952.

the motives of self-interest may at one time result in actions which put the market "out of line" whereas at other times the motives of self-interest may result in a "desirable" adjustment of values. The critical point is the extent to which checks and balances exist which tend to limit the possibilities of price maladjustment.

There are certain checks and balances which come into play whenever prices get out of line with supply-demand conditions. In varying degrees with respect to forcefulness and quickness of response, they set forces in motion which tend to limit the extent and period of maladjustment and then correct (or sometimes over-correct) the maladjustment. With respect to butter prices the checks and balances which exist are brought into play at several different points: (1) The consumer level; (2) the local distributor level; (3) the open-market level; (4) the spot board of the mercantile exchange; and (5) the creamery.

The willingness or lack of willingness of consumers to buy butter at a particular price is a factor which sets into action forces which make for price readjustment. Assuming no change in supply, increased purchases by consumers as a result of activities which have unduly depressed butter prices result in increased orders by local distributors, which in turn are felt by large receivers in the central markets; and which will influence the attitude of receivers with respect to the price at which they will be willing to buy or sell supplies on the open market. Often an increased demand for supplies by large receivers may first be noted as a tendency of receivers to ask more than the "normal" wholesale markup for supplies of butter in the open market. This, in turn, may result in action on the spot call to raise the level of the quotation, if the needed supplies are not found in the open market at existing price levels.

Likewise, resistance to price on the part of consumers as a result of activities which have raised prices unduly will in the same manner set into play forces which will tend to lower prices to the point at which demand and supply will again be in balance.

Ordinarily, there is a considerable time lag before increased or decreased purchases by consumers become an effective force in bringing about adjustments in price. This part of the mechanism is slow and relatively ineffective for checking relatively small daily fluctuations in price.

At the open-market level receivers who believe prices are too high and look for a decline may attempt to dispose of some supplies on the open market at the higher level with a view to replacing it with lower costing butter. Likewise, if receivers believe the level of price is lower than market conditions indicate they will buy additional supplies on the open market at what they consider to be a price which is lower than that which they expect to pay for supplies in the near future. Retailers and jobbers also attempt to adjust their inventory policy to their judgment of the market. If retailers or jobbers anticipate a decline in values they may begin to buy on a day-to-day basis rather than on a weekly basis, or if they anticipate an increase in values, they may buy in larger quantities than usual.

Storage butter serves as a potential price-depressing force during the in-storage season, and, likewise, the demand for storage butter serves as a price-raising force whenever prices during the in-storage season become unduly attractive.

Short-time response of creameries to price maladjustment comes mainly from large diversified manufacturing plants which overnight are able to divert supplies of milk from one product to another depending on product price relationships. If butter prices become relatively favorable large quantities of milk may quickly be diverted from other manufacturing uses into butter. Likewise, at times, supplies of milk may be quickly diverted to other uses if the price of butter is relatively unfavorable.

The time required to set these various checks and balances into motion varies, and because of time lags, in response, which are involved it may take a week or more for certain of the responses to be felt, whereas in other cases the responses may be nearly instantaneous. In many cases the responses may not be felt until conditions have changed in which case the response may result in further price maladjustment.

Effectiveness of Checks and Balances

Many of the checks and balances can be immediately exerted through the medium of trading on the spot boards of the mercantile exchanges, whereas others cannot.

In arguing that the volume of trading on the exchange is unimportant, the following point is often made: Dealers are not going to stand by and see the value of their inventories reduced if they do not believe the decline is justified, and they are not going to see their procurement costs increased if they do not feel that they can market the butter at the higher price. Therefore, a trader cannot bid the market up against the sentiment of the rest of the trade unless he is willing to buy all supplies offered at the price bid; and likewise the market cannot be offered down against the sentiment of the trade unless the offerer is willing to sell unlimited quantities of butter at the lower price. Although this is an important point, experience indicates that at times, for short periods of time, individuals can exert disproportionate influence on the market.

The "thin" market which forms the basis for quotations makes it possible for a person with adequate financial resources to temporarily raise or lower the market several cents out of line with market conditions at certain times. A large New York milk cooperative rigged the New York market for a period of 5 days for the purpose of bolstering the minimum price to be paid producers for milk in the New York milk marketing area under the terms of the New York Federal Milk Marketing Order. Prices paid to producers for milk under this order were directly determined by butter prices at the time. During this period the New York quotations were maintained while Chicago prices were falling until the difference became as much as 8 cents. To do this the cooperative was forced to buy 668,010 pounds of butter. This was

approximately 20 percent of sales on the New York exchange during 1946. 19/ The day that this buying stopped, the New York market dropped 10 cents.

Although this case indicates the possibility of an individual putting the market "out of line" temporarily, it also shows how difficult it is for an individual or group of individuals to keep the market out of line for more than a few days. An examination of the amounts of butter bought by the co-operative on each day that it supported the market indicates that such manipulation becomes progressively more difficult. (Table 10.) The buyer took a sizable loss on this butter since it could be sold only at a price considerably lower than the price at which it was bought.

Receivers say that one of the reasons why they do not often use the spot boards as a source of, or outlet for, supplies is that by doing so their purchases or sales would have too much effect on price. This may be taken as an indication of the sensitivity of the spot butter markets to purchases or sales on the part of individual buyers or sellers. A New York dealer raised a considerable disturbance in the market several years ago by using the spot board as a source of a relatively large volume of supplies for a period of time. His bidding for supplies raised the market out of normal relationship with Chicago and provided a good example of how the activities of a relatively small distributor can temporarily upset the mechanics of price determination. This dealer's defense of his actions was that he needed butter and, unable to buy it elsewhere, went to the exchange to buy it.

The fact that the spot butter market of the mercantile exchanges are not ordinarily used as a source of supplies or as an outlet for supplies, but rather as a point where trading is engaged in for the purpose of adjusting values, creates problems at times when persons attempt to use the exchange as a market place. An increased volume of trading on the exchanges would tend to minimize the effect of individual transactions.

Table 10.--Amounts of butter purchased for the account of one buyer on the spot call of the New York Mercantile Exchange, December 18-24, 1946

Date	:	Amount purchased
		<u>Pounds</u>
December 18 - - - - -		8,815
December 19 - - - - -		47,605
December 20 - - - - -		85,600
December 23 - - - - -		329,498
December 24 - - - - -		196,492
Total		<u>668,010</u>

Compiled from information in Dairy Record. Vol. 47, No. 33. Jan. 15, 1947.

19/ The spot butter call of the New York Mercantile Exchange was open only the last six months of 1946 owing to the fact that butter prices were controlled by OPA during the first six months of the year.

A factor which affects the effectiveness of some of the checks and balances is the fact that many large buyers and sellers of butter do not ordinarily trade on the mercantile exchanges but are willing to let others take the responsibility of establishing values. The fact that many buyers and sellers are more interested in margins relative to the quotation than the quotation itself apparently creates a feeling of relative indifference on the part of some dealers as to short-time fluctuations in the quotation.

There appears to be a tendency for many receivers to await major developments on the exchange before taking action on the spot board to protect their trading position. Some receivers, although they follow the trading on the mercantile exchanges closely, apparently prefer to let others do most of the trading and themselves will buy or sell only when essential to their interests. This influences the quickness with which various interests are brought to bear on the exchange trading. Furthermore, certain receivers who have the majority of their supplies committed to a regular trade may not have uncommitted butter available to offer on the spot call on a particular day to protect their over-all interests.

Buyers may resist changes in price by starting to buy on a day-to-day basis when they feel there is more chance for prices to decline than to increase. That is, the buyer has his inventory policy under his own full control, and he may choose that means of adjusting to a short supply or high price situation, rather than trying to influence prices directly. This process probably delays necessary adjustments in prices and may tend to make adjustments unduly severe when they do come because of the "backing up" effect on supplies that buying on a day-to-day basis has had. In other words, dealers may get an unduly pessimistic picture of demand when buyers choose to reduce their purchases rather than to bargain directly for a lower price. This may be one cause of the wide variation in movement of butter into retail channels from week to week. (Table 11) If more buyers could or would enter directly into the trading which establishes the quotation, it would bring the forces of supply and demand to bear more directly at the point where values are established rather than in an indirect manner.

The difficulties for distributors not located in Chicago or New York to trade on the spot boards contribute to the ability of individuals in the central market to exert undue control over prices in the short run.

At times the volume of butter in Chicago or New York which was available for exchange trading has been so limited or held by so relatively few dealers that the market could be bid up very easily. Again the thinness of the market makes for potential abuse of the price-determining system and affects the quickness with which checks and balances may be brought into play.

Possible rigging of the market is also facilitated by the fact that at times butter prices are unstable and tend to fluctuate from day to day. Factors which cause variability in price, particularly lack of adequate market information, favor the would-be manipulator and reduce the effectiveness of the checks and balances.

Table 11.--Butter: Movements into retail channels in Chicago, by weeks, 1951 1/

Week ended	Chainstores			Dairy companies			Wholesale distributor	Total reported	Percentage change from previous wk.	
	Stores	Total	Per store	Routes	Total	Per route				Percent
1951	Number	Pounds	Pounds	Number	Pounds	Pounds	Pounds	Pounds		
Jan. 6	1,073	491,993	459	1,965	101,833	52	351,893	945,719	-	9.89
13	1,070	451,271	422	1,969	105,440	54	383,504	940,215	-	0.06
20	1,070	467,716	437	1,968	106,194	54	388,074	961,984	✓	2.32
27	1,066	476,438	447	1,968	106,374	54	378,112	960,924	-	0.11
Feb. 3	1,063	468,244	440	1,968	111,897	57	390,678	970,819	✓	1.03
10	1,064	483,225	453	1,968	111,659	57	380,512	975,396	✓	0.47
17	1,064	493,149	463	1,969	103,837	53	387,746	984,732	✓	0.96
24	1,060	497,949	470	1,969	104,204	53	371,276	973,429	-	1.15
Mar. 3	1,059	460,763	435	1,962	100,534	51	369,366	930,663	-	4.39
10	1,050	468,481	446	1,962	100,459	51	372,341	941,281	✓	1.14
17	1,042	488,103	468	1,964	106,949	54	369,316	964,368	✓	2.45
24	1,035	497,501	481	1,961	110,822	57	396,481	1,004,804	✓	4.19
31	1,035	443,828	429	1,962	95,906	49	352,587	892,321	-	11.19
Apr. 7	925	470,519	509	1,962	101,291	52	376,976	948,786	✓	6.33
14	923	453,127	491	1,961	101,003	51	369,086	923,216	-	2.70
21	925	472,327	511	1,960	106,129	54	385,351	963,807	✓	4.40
28	921	447,873	486	1,959	101,656	52	376,506	926,035	-	3.92
May 5	921	437,489	475	1,960	97,622	50	379,629	914,740	-	1.22
12	923	435,345	472	1,958	89,091	46	363,327	887,763	-	2.95
19	923	454,815	493	1,965	93,345	47	381,381	929,541	✓	4.71
26	924	435,992	472	1,959	92,008	47	365,034	893,034	-	3.93
June 2	923	416,692	451	1,952	110,799	57	356,095	883,586	-	1.06
9	923	452,384	490	1,950	98,774	51	332,926	884,084	✓	0.06
16	923	456,467	495	1,942	101,345	52	364,640	922,452	✓	4.34
23	925	421,675	456	1,937	96,601	50	352,877	871,153	-	5.56
30	925	416,489	450	1,929	95,080	49	350,031	861,600	-	1.10
July 7	920	396,177	431	1,923	91,235	47	332,039	819,451	-	4.89
14	925	380,234	411	1,922	89,228	46	330,156	799,618	-	2.42
21	922	352,801	383	1,912	83,571	44	334,223	770,595	-	3.63
28	921	341,143	370	1,908	82,803	43	328,290	752,241	-	2.38
Aug. 4	920	341,211	371	1,904	80,827	42	328,445	750,483	-	0.23
11	921	352,458	383	1,898	86,320	45	328,022	766,800	✓	2.17
18	904	358,733	397	1,893	89,366	47	393,316	841,415	✓	9.73
25	913	373,824	409	1,891	92,651	49	351,868	818,343	-	2.74
Sept. 1	918	383,155	417	1,889	100,265	53	414,238	897,658	✓	9.69
8	920	381,590	415	1,883	85,709	46	320,929	788,228	-	12.19
15	919	380,158	414	1,879	95,354	51	367,155	842,667	✓	6.91
22	919	407,323	443	1,854	94,643	51	358,520	860,486	✓	2.11
29	926	394,801	426	1,835	95,715	52	377,338	867,854	✓	0.86
Oct. 6	930	392,106	422	1,814	95,543	53	339,722	827,371	-	4.66
13	930	403,000	433	1,801	97,380	54	350,346	850,726	✓	2.82
20	930	386,906	416	1,794	92,554	52	353,941	833,401	-	2.04
27	929	395,897	426	1,784	93,965	53	347,983	837,845	✓	0.53
Nov. 3	930	394,735	424	1,776	94,451	53	365,717	854,903	✓	2.04
10	931	418,579	450	1,774	105,199	59	370,506	894,284	✓	4.61
17	931	451,901	485	1,767	106,098	60	381,356	939,355	✓	5.04
24	929	448,612	483	1,763	102,148	58	382,905	933,665	-	0.61
Dec. 1	926	375,422	405	1,768	92,843	53	364,951	833,216	-	10.76
8	927	400,220	432	1,760	90,204	51	372,742	863,166	✓	3.59
15	930	396,161	426	1,756	100,498	57	386,060	882,719	✓	2.27
22	931	531,248	571	1,754	130,926	75	451,079	1,113,253	✓	26.12
29	931	439,974	473	1,750	118,104	67	380,160	938,238	-	15.72

1/ Reported by sample group of chainstore organizations, dairy companies, and wholesale distributors. These figures do not represent total retail movements.

Restrictive Features of Marketing System

Certain features of the marketing system tend to restrict the movement of supplies of butter in response to changes in supply and demand and influence the effectiveness of the checks and balances which act to limit price maladjustment. The most important factors are: (1) The sales agreement system; and (2) the distribution of large quantities of butter by integrated marketing organizations. Both of these factors tend to cause a "stickiness" in the marketing system; the response to price is dulled and prices can stay out of line longer than would be the case if sales agreements and integration did not restrict the quantity of butter reaching the central markets and entering open-market transactions. (No implication is intended that the net effects of either of these features of the marketing system are undesirable. In fact, both features tend to reduce marketing costs.)

The sales agreement system, under which receivers buy supplies from creameries on the basis of an understanding that settlement will be made on the basis of a published quotation, plays an integral part in the marketing of butter. 20/ Sales agreements provide the creamery with a regular outlet for its supplies and provide the receiver with a regular source of supplies of known characteristics. Sales agreements create certain problems which inhibit the action of price upon the movement of supplies, of which it is important to be aware:

1. Sales agreements make it difficult for receivers to obtain additional supplies of butter from creameries except by offering to pay a creamery manager a higher premium than he is currently receiving from some other receiver. In other words, competition among receivers for supplies from creameries results in premiums.
2. Under the sales agreement system, supplies of butter keep coming to a receiver whether he needs them or not. Supplies can't be easily "shutoff."

20/ There are indications that in certain areas forces are at work which may lessen the use of sales agreements.

The development in recent years of many large plants in the Midwest, particularly Wisconsin, which receive whole milk and manufacture a large number of dairy products as well as butter, has created problems for the sales agreement system. These plants may be standby plants for fluid milk markets and may at times sell large quantities of cream in Eastern markets; they also may be equipped to manufacture whole milk powder, evaporated milk, and cheese as well as butter and nonfat dry milk solids. At times, such plants manufacture very sizable quantities of high-quality butter; at other times when "higher-use" outlets are available, they may manufacture only enough butter to meet the needs of their patrons and local outlets. Receivers having sales agreements with these large diversified plants have a much less dependable source of supplies than do receivers having sales agreements with creameries in the farm separated cream areas where no product other than butter is manufactured.

3. Sales agreements reduce the amount of bargaining between creameries and receivers, because of the long-term nature of sales agreements.
4. Sales agreements tend to create a system where non-price relationships between seller and buyer become important.
5. Supplies of butter do not readily move between markets in response to short-time price advantages.

The distribution of large quantities of butter by receivers to their own jobbing and retail outlets throughout the country also tends to inhibit the effect of price on the movement of supplies of butter. A large chain-store or meatpacker, for instance, must move supplies into various outlets in the East in order to meet requirements of these outlets regardless of whether the relationship of the New York quotation to the Chicago quotation is favorable or unfavorable.

Because of the importance of long-time relationships between receivers and creameries and the fact that receivers are in a position of having to supply regular outlets regardless of central market price relationship at a particular time, it is probably easier for the New York and Chicago central market quotation to get out of line and to stay out of line for a period of time.

A good example of the degree of inflexibility which is introduced by certain features of the present pricing arrangements is provided by the behavior of wholesale butter prices in Philadelphia. The Philadelphia prices are closely related to New York quotations. Instances have been observed when supplies of butter in Philadelphia were short but because of a decline in price at New York the price at Philadelphia also declined.

Relationship of Volume of Trading on Exchanges to Daily Price Changes

It is interesting to note the relationship between the day-to-day changes in the central market quotation and the nature and extent of the activity on the spot board which is associated with day-to-day changes in price.

If a large degree of control were being exercised over butter prices by a small group of receivers acting in collusion it would be expected that a relatively large daily price change up or down could be brought about with little more offering or bidding than would have to be made to bring about a small adjustment in price. On the other hand, if the market were more competitive and conflicting interests were represented in the trading it would be expected that a large upward change in price would be associated with a relatively larger number of bids and that a sharp decline in daily prices would be associated with a relatively larger number of offerings. In a very general way a comparison of day-to-day price changes and the number of bids and offers on the spot call shows the amount of trading necessary to influence the market, and provides some basis for judging the extent to which direct checks and balances are represented in the exchange trading.

Figure 2 shows the number of unfilled bids and uncovered offers on the spot butter board of the New York Mercantile Exchange during 1948 which were associated with various day-to-day changes in the Urner-Barry quotation for 92 score butter. Sharp increases in price were generally associated with a relatively larger number of bids than small increases and large downward price movements were generally associated with a relatively larger number of offers than were associated with small price declines.

AVERAGE NUMBER OF
UNCOVERED OFFERS
OR UNFILLED BIDS

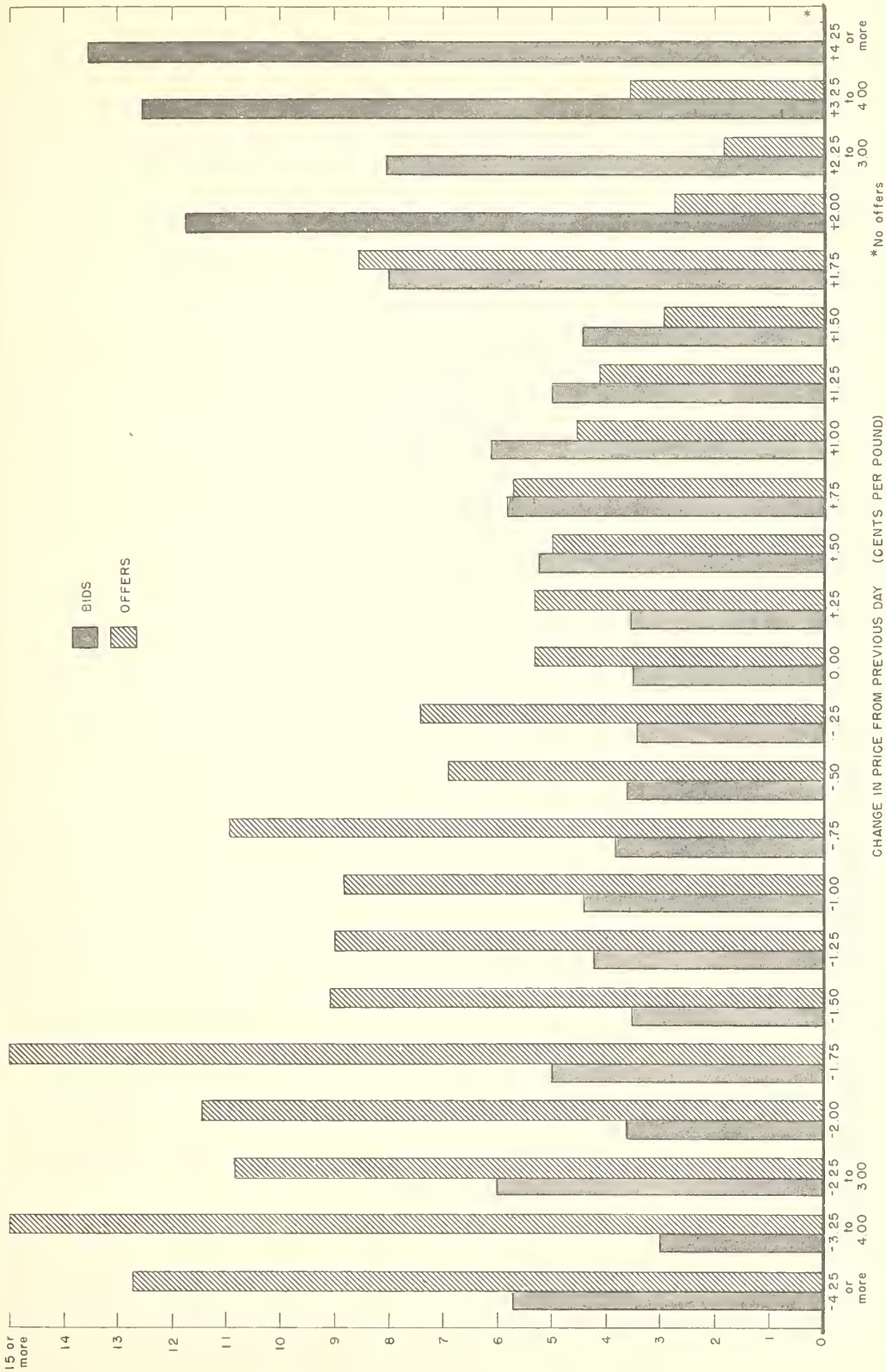


Figure 2.--Average number of unfilled bids and uncovered offers associated with various daily changes in the price of 92 score butter at New York, 1948.

DAY-TO-DAY FLUCTUATIONS IN SPOT BUTTER PRICES

One of the criticisms of spot butter prices has been the fact that at times the prices have fluctuated violently from day to day. Many persons have looked upon this as an indication of manipulation. A statement given to the New York and Chicago mercantile exchanges by a committee made up of several of the largest butter receivers in the country, butter-marketing cooperatives, creameries, and a representative of one of the State universities indicates the concern which was expressed early in 1948 in respect to the matter of daily fluctuations in the price of butter: 21/

"Changes in butter prices on the New York and Chicago mercantile exchanges have been so frequent and large in recent months as to be a matter of unusual concern among farmers, creamery operators, handlers of butter, and even retailers and consumers.

"Daily ups and downs in butter prices have been more numerous and frequently larger than would appear to be warranted by day-to-day changes in supplies or by general demand and supply conditions.

"In 21 out of 83 trading days from January 1st to April 30, 1948, butter prices on the Chicago market went up or down 2 cents or more per pound. On 12 days the change was 3 cents or more per pound, and on 1 day over 7 cents per pound. Similar data for New York showed even wider and more frequent price changes.

"Several hundred million pounds of butter are purchased and sold annually on the basis of butter quotations determined largely from sales on these exchanges. It follows that the transactions on these exchanges should be as representative as possible of actual conditions in the whole butter industry. Only in this way can the exchanges be reliable 'barometers' of price and markets."

Undue short-time fluctuations in prices of butter or other products are undesirable for a number of reasons:

1. Marketing risks brought about by such short-time fluctuation may add to the cost of distribution. Information obtained concerning average monthly prices received for butter by a group of creameries during 1947, a year when butter prices were unusually variable, showed wide variations among plants

21/ Members of this committee were M. F. Totten, Land O' Lakes Creameries; A. J. Nelson, North Star Dairy; Prof. R. K. Froker, University of Wisconsin; Omar Gaston, John Habbegger Co.; Leo Benson, State Brand Creameries; Walter Grell, Armour and Company; and Orville Ause, H. C. Christians Company.

in average monthly prices received for butter. 22/ For example, one plant received an average of 66.4 cents for butter in February and another plant received 73.0 cents. The following month the plant which received the lower price in February received an average price of 72.0 cents and the other plant received 67.3 cents. These differences undoubtedly were due largely to the fact that during each month one creamery was fortunate enough to have made shipments at times when the market was high and the other plant was unfortunate enough to have made shipments when the market was low.

2. From the producer's and the distributor's standpoint sharp changes in price are undesirable, particularly in the case of a product where a substitute product is available. In the case of butter, sharp price rises may induce consumers to switch to other spreads and when prices fall a certain proportion of those who have made the "switch" may not renew their purchases of butter.
3. Fluctuations in prices may attract undue speculative activity of a sort which in turn may create additional instability.

Fluctuations of Butter Prices Relative to Other Agricultural Commodities

In considering whether or not the day-to-day fluctuations in butter prices have been unreasonable, it is helpful to compare the variability in daily butter prices with variability in prices of other agricultural commodities. The analysis which follows was made for three other commodities, eggs, cotton, and wheat. All three commodities are sold on commodity exchanges. The volume of trading on the spot egg market is relatively limited. On the other hand large quantities of spot wheat are bought and sold on commodity exchanges. Spot cotton prices are established by a quotation committee in ten designated markets. This method of establishing spot quotations is specified in regulations issued by the Secretary of Agriculture under the authority of the U. S. Cotton Futures Act. 23/ The average of the prices at the ten designated spot markets is frequently used as a settlement base.

Two years' daily prices for each commodity were analyzed. An attempt was made to select one year for which prices were extraordinarily variable, and one year when prices were relatively stable.

Daily butter prices for the "variable year" were somewhat less variable than those for wheat or eggs and considerably more variable than those for cotton. 24/ (Table 12.)

22/ March, R.W. The Pricing of Surplus Milk in the Chicago Market. p. 38. PMA. USDA. Nov. 1949.

23/ Regulations of the Secretary of Agriculture under the U. S. Cotton Futures Act as Amended. USDA. PMA. June 1948.

24/ On the basis of the percentage the standard deviation of daily price change was of average price.

Table 12.--Average prices, average daily price change and its standard deviation, and number of days the price change was up, down, or zero for butter, cotton, wheat, and eggs, 1947 and 1950

Commodity	1947										1950 1/									
	: Standard deviation :					: of daily :					: Standard deviation :					: of daily :				
	: Average :					: Average :					: Average :					: Average :				
	: Unit :	: price :	: change :	: Percentage :	: Amount :	: Unit :	: price :	: change :	: Percentage :	: Amount :	: Unit :	: price :	: change :	: Percentage :	: Amount :	: Unit :	: price :	: change :	: Percentage :	: Amount :
		Cents	Cents	Percent	No.		Cents	Cents	Percent	No.		Cents	Cents	Percent	No.		Cents	Cents	Percent	No.
Butter, 92-score at Chicago - - - - Lb.	70.22	+0.052	+1.063	1.51	93	56	106	106	61.27	+0.034	+0.241	0.39	31	10	213					
Cotton, spot prices for Middling 15/16" in 10 designated markets - - - - Lb.	34.58	.009	.334	0.97	159	123	4	4	42.58	+ .045	+ .340	.80	163	110	9					
Wheat, No. 2 hard winter, at Chicago - - - - Bu.	263.58	+ .316	+4.704	1.78	144	117	28	28	225.05	+ .094	+1.912	.85	150	120	22					
Eggs, extras, minimum 60% A, large, Chicago - - - - Doz.	45.56	+ .045	+ .572	1.26	44	31	180	180	52.29	- .030	+1.420	2.72	61	54	139					

1/ 1951, for eggs.

2/ Simple average of average monthly prices.

Butter and Eggs: Compiled from data in Dairy and Poultry Yearbook, 1947, 1950, 1951, published by Dairy Listing Service, Chicago, Ill., for 1947 and 1950 and by the Chicago Mercantile Exchange in 1951.
Cotton: Compiled from daily reports of cotton quotations. Cotton Branch, PMA.
Wheat: Compiled from unpublished data obtained from Grain Branch, PMA.

Extent of Price Fluctuations

Daily butter prices were relatively stable during 1940, 1941, 1949, 1950, and 1951; they were relatively variable during the last half of 1946, and during 1947 and 1948. (Table 13.) During part of 1942 and 1946 and during all of 1943, 1944, and 1945 butter prices were under Government price control. During 1949 and 1950 butter prices were at or near Government support levels. The support program was also a stabilizing influence during 1951.

During 257 trading days in 1948 the Chicago market price increased from the previous day's price on 68 occasions, decreased on 60 occasions and did not change on 129 days. Forty-four of the increases and 49 of the decreases were 1 cent or more. Thirteen of the increases and 27 of the decreases were 2 cents or more. On the other hand in 1951 there were only two increases of 2 cents or more and only one decrease larger than 2 cents.

During 1948 most of the increases and decreases were in 1/2-cent units, particularly at Chicago. There were no 1/4-cent increases and only one 1/4-cent decrease. The price increased by 1/2-cent 22 times and by 1-cent 23 times but increased by 3/4 of a cent only twice. Decreases were also grouped on the 1/2-cent intervals with very few changes in 1/4-cent units. In all, during 1948, 63 of the 68 increases were in 1/2-cent units and 56 out of 60 decreases were in 1/2-cent units.

During 1951 the daily price changes assumed a more nearly normal distribution with more than half of the total increases being 1/4 of a cent, and 12 of 35 decreases being only 1/4 of a cent. (Table 14.)

Comparison of Price Fluctuations at Chicago and New York

During each of the years 1947, 1948, and 1951 the commercial quotations for the New York market showed considerably more variability than did the Chicago market quotations. In 1947 the Chicago quotation for 92 score butter changed by 1/2 cent or more from the previous day on 131 occasions, whereas the New York market changed by 1/2 cent or more 172 times. In 1948 the Chicago quotation changed by 1/2 cent or more on 127 occasions while the New York quotation changed by 1/2 cent or more on 188 occasions.

Reasons for Price Fluctuations

After a sharp increase or decrease in the price of a commodity such as butter it is not uncommon to hear the following type of comment, "How can the price of butter drop 5 cents a pound from one day to the next," or, "why is a pound of butter worth 75 cents on Thursday and 70 cents on Friday." The reasons are much the same as the reasons why a stock on the New York Stock Exchange may be listed at 12 1/2 one day and 10 the next. A commodity is worth what those buying and selling it think it is worth, or, more specifically in the case of butter what large buyers and sellers are willing to buy or sell for. We may say that the explanation of short-time price fluctuations

Table 13.---Average prices of 92 score butter at Chicago, average daily price change and its standard deviation, and number of days the price change was up, down, or zero, 1940-41, July-December 1946, and 1947-51

Year	Average		Standard deviation		Number of	
	: Average		: of daily price change		: days price	
	: price 1/	: price	: Amount	: Percentage of	: change was--	
	: change	: change	: average price	: + ; - ; 0		
	Cents	Cents	Cents	Percent	No.	No.
1940 - - - - -	28.71	+0.010	+0.251	0.87	59	39
1941 - - - - -	33.76	+ .007	+ .317	.94	73	48
1946 (July-Dec.) -	76.19	+ .032	+1.380	1.81	50	26
1947 - - - - -	70.22	+ .052	+1.063	1.51	93	56
1948 - - - - -	74.76	- .087	+1.324	1.77	68	60
1949 - - - - -	60.84	- .017	+ .358	.59	28	24
1950 - - - - -	61.27	+ .034	+ .241	.39	31	10
1951 - - - - -	68.89	+ .051	+ .409	.59	63	35

1/ Simple average of average monthly prices.

Computed from data in Chicago Price Current.

Table 14.—Frequency distribution of day-to-day changes in the price of 92 score butter at Chicago and at New York, 1947, 1948, 1951

Change from previous day's price	Chicago			New York		
	1947	1948	1951	1947	1948	1951
Cents	Number	Number	Number	Number	Number	Number
+ 3.00 or more - - -	2	4		2	7	
+ 2.75 - - - - -					2	
+ 2.50 - - - - -	2	3		2	4	
+ 2.25 - - - - -				1		
+ 2.00 - - - - -	6	6	2	5	3	1
+ 1.75 - - - - -			1	7	2	
+ 1.50 - - - - -	11	5		15	7	2
+ 1.25 - - - - -	4	3		6	8	
+ 1.00 - - - - -	23	23	6	27	22	8
+ 0.75 - - - - -	3	2	4	8	9	4
+ 0.50 - - - - -	35	22	18	26	26	29
+ 0.25 - - - - -	7		32	16	6	31
Total increases- -	93	68	63	115	96	75
0.00 - - - - -	106	129	157	53	48	127
Total decreases- -	56	60	35	83	110	48
- 0.25 - - - - -	10	1	12	11	12	21
- 0.50 - - - - -	5	9	15	21	20	16
- 0.75 - - - - -	2	1	7	13	8	4
- 1.00 - - - - -	11	11		12	24	5
- 1.25 - - - - -	3	1		4	6	1
- 1.50 - - - - -	7	10		3	13	
- 1.75 - - - - -	2			1	2	
- 2.00 - - - - -	6	12		5	12	1
- 2.25 - - - - -	2	1		4	1	
- 2.50 - - - - -	4	7		2	3	
- 2.75 - - - - -				1	2	
- 3.00 or more - - -	4	7	1	6	7	
Total - - - - -	255	257	255	251	254	250

Compiled from data in Chicago Price Current and Producers' Price Current.

may be found in the factors which affect the willingness of buyers to buy at a particular price or sellers to sell.

Factors which affect short-time willingness to buy or to sell may be broken down into several categories, as follows:

1. Published information as to production of butter, storage holdings, consumption, prices of other dairy products.
2. Less specific, but often more timely, information concerning production, consumption, and other supply-demand factors which buyers and sellers pickup during the course of business, such information many times may border on rumor.
3. Outlook information as to prospective production, stocks, and consumption and price.
4. "Feel" of the market based largely on long experience in the market.
5. Certain psychological factors which may have little, if any, relation to the economics of the situation.
6. Other factors which may be associated with particular characteristics of butter such as seasonality of production, or the nature of the agencies engaged in its production and distribution, or the degree of competition which exists.

Specifically there are several factors which appear to be important causes of the sometimes rather sharp fluctuation in daily butter prices. Seasonally, butter production is variable with production nearly twice as great in the spring and early summer as in the fall of the year. Butter production also is often variable and unpredictable from week to week. Ordinarily, butter represents the lowest use value for butterfat. Supplies of milk and cream are processed into butter if more profitable outlets are not available and on the other hand may be rapidly diverted from butter to other manufactured products or cream on short notice if such outlets become available. Receivers depending on multi-purpose plants may find that the creameries from which they obtain supplies have quit churning temporarily or are starting to churn again. This has a considerable effect on their supply situation. Frequently these sharp changes in the volume of supplies received may be felt by a number of receivers at about the same time because of the fact that forces favoring shifts between butter and higher use products tend to affect many plants simultaneously.

The amount of butter moved into retail channels from week to week varies considerably. This makes it difficult for receivers to appraise short-time changes in demand.

Buying and selling on the basis of the quotation tends to reduce the amount of bargaining between buyer and seller, and tends to delay necessary price adjustments and further tends to restrict the movement of supplies

between markets in response to price changes. For instance, buyers, when prices get to a point where they consider that there is more chance of prices going down than going up, may restrict purchases and buy on a day-to-day basis rather than bargain for a lower price. This tends to delay necessary price changes, create a false impression as to demand for butter, and probably makes price changes more severe when they come. After the sharp break has come, a period of heavy buying may follow to again fill the "pipe lines" of distribution.

The manner in which quotations are established probably tends to make for greater price fluctuation from day to day. The number of those involved in the actual price-making transactions is limited and the volume of trading on which quotations are based is limited for reasons previously discussed. This makes it easier for an individual to influence price for a day or two, by his own actions.

Because of the relatively small volume of open-market trading in wholesale bulk butter, buyers and sellers do not have as much opportunity to obtain information as to short-time changes in supply-demand conditions, particularly demand conditions, as they would have if there were a broader wholesale market for butter. Buying or selling in the open market by a large buyer may be given more significance than is justified. Several receivers said that open-market purchases or sales by large buyers of butter often had a considerable effect on spot butter prices and on their own judgment of market conditions. However, during the course of conversation with several of these large buyers they indicated that the nature of their open-market buying or selling was such as to provide no reasonable basis for judging their over-all supply situation. Probably a few well-placed central market wholesalers find themselves in a position to perceive rather quickly the short-time changes in supply-demand conditions; however, such wholesalers are so few in number as to raise the question of whether their more nearly perfect market information would have a stabilizing or unstabilizing effect on the market. Imperfect information as to changes in supply-demand conditions which stems in part from the nature of the marketing system tends to create price fluctuations.

When butter is being put into storage the speculative demand for storage butter tends to stabilize the butter market. As receivers and distributors move from the point that production has started to increase in December to the point where the into-storage movement exceeds the out-of-storage movement, most receivers find it desirable to move receipts of butter as they are received and to gradually reduce their storage holdings. Small changes in production and stocks have considerable effect on price. The market is "nervous" or "touchy," and dealers tend to have little confidence in values. This lack of confidence, in part, reflects an inadequate basis for making decisions as to what supply-demand conditions will be. A wave of optimism or pessimism may send prices up or down. Speaking of conditions in the Chicago butter market in January 1952, one large Chicago receiver indicated that all you had to do was to "blow" to move the market one way or another. A New York dealer in a letter to the Editor of the Dairy Record made the following statement which pertains directly to the subject: 25/

"Another cause of wild fluctuations is because we have a "thin" market. I'll explain what I mean this way: -- during the summer there is a lot of butter--too much to be eaten--and so we hit a level at which some people are willing to buy the surplus butter and store it. That acts as a steadying influence and keeps the market from going down in violent jumps. At the same time a reserve supply of butter is on hand and if the market goes up someone is willing to sell some of this reserve and this keeps us from too many violent swings.

"But now February storage butter which acted as a steadying influence on the market is about all gone--and what's left cannot well be used as fancy. At the same time no one has confidence enough in butter to want to accumulate any at present prices--and so buyers only buy what they need for a few days and sellers want to sell out as soon as the butter comes in. There is neither reserve buying--nor a willingness to hold butter which would act as a steadying influence. A few days' extra supply will send it down--and short supplies send it up."

Another possible reason for day-to-day fluctuations in butter prices is the fact that the various published information with respect to production, stocks, movement into retail channels, and other factors becomes available on different days of the week so that the impact of production information is felt one day and stocks information another day. Also much demand and supply information is not available on a daily basis, but at weekly intervals and, for this reason, at times the impact of certain changes in supply or demand instead of being felt gradually may have more of an impact on the market because they represent an accumulation of happenings.

Local supply conditions may, on occasion, be responsible for short-time fluctuations. At certain times there may be little uncommitted butter available for trading on the exchange and the market may be bid up because of a local short-time supply situation. Dealers faced with the necessity of supplying butter to their regular trade may at certain times find it difficult to obtain enough butter to sell on the exchange to keep the market from rising.

An apparent indifference of many large distributors to the actual level of prices also may be listed as a factor contributing to daily price fluctuations. This point, of course, is very closely related to two other points: (1) The thinness of the market; and (2) the fact that buying and selling on the basis of the quotation will tend to put many buyers and sellers in a position where they are more concerned with margins relative to the quotation than with the actual level of the quotation itself.

PREMIUMS AND THE "UNDERQUOTED" MARKET

One of the most frequent criticisms of central market butter quotations is that such quotations are not representative of the price at which large quantities of butter are bought and sold. To support this contention, it has been pointed out that premiums over the central market quotation are frequently paid to creameries. It is further pointed out that a receiver cannot pay premiums over the wholesale quotation to the creamery and then profitably sell the butter in the central market at the quotation. The conclusion is then drawn that the central market quotations "underquote" the market.

The "premium evil" has been considered by some to be one of the most serious shortcomings of the present system of wholesale butter price establishment. Considerable discussion has been given to the reporting of prices received by creameries f.o.b. plant for butter in order that information may be available as to what creameries actually receive for butter. 26/

The explanation of premiums and the "underquoted" market appear to lie in a combination of the following inter-related factors:

1. The commercial quotations are not thought of by the trade as being an average of wholesale prices. They are rather thought of as barometers of value; they are used as a basing price to which premiums, discounts, or other trade markups are applied. The wholesale selling prices reported by USDA reflect a limited volume of trading and a stage in the marketing system which is generally bypassed, particularly in Chicago.
2. Corollary to point 1, large integrated receivers and distributors such as the chainstores and others, because of efficiencies realized in distribution and because of the nature of their distributive outlets, are able to pay more for butter than would be the case if they had no outlet for the butter other than the wholesale open market.
3. Butter offered on the open market usually tends to be the least desirable part (within grade) of a receiver's supplies and therefore might be expected to bring a price which was "less than average" for the grade; the assumption being that a receiver's most desirable supplies are distributed to his regular trade. The extent to which this point is valid is not known, and the effect, if any, on

26/ Mathis, Anthony G. Market News Reporting of Prices Received by Creameries. USDA. PMA. 37 pp. March 1952.

the level of central market prices is almost impossible to determine. However, if valid, point 1 above would tend to minimize the importance of this factor.

4. Because of the nature of direct buying arrangements which receivers have with creameries, competition for supplies takes the form of offering a higher premium to a creamery than it is presently receiving. Additional regular supplies may be most easily acquired in this manner. Although, theoretically, this bargaining could be on the basis of the size of discounts below the quotation rather than premiums, the psychology of the situation apparently is such that the existence of premiums appears to be almost inevitable in any system where supplies are purchased on the basis of a published quotation. This conclusion is reinforced by evidence that the level of premiums has increased during periods of time when supplies of butter were generally short.
5. Receivers stated that premiums are paid to a creamery for butter which has certain characteristics with respect to flavor, color, or body which are desired by their particular trade. All the characteristics of butter are not adequately defined by grade, and, furthermore, characteristics which are considered desirable by the customers of one receiver may be considered undesirable by the customers of another. Receivers, in order to obtain butter having the characteristics which their customers desire, will pay premiums to get such butter. Receivers are also willing to pay premiums to creameries on the basis of such factors as size and regularity of shipment and uniformity of product. These observations are supported by the significance which buyers attach to the stencil or "mark" identifying the creamery which manufactured the butter. Location of a creamery with respect to a receiver's outlets may also be a reason for the paying of a premium.

Because of the above factors, it would appear almost impossible to expect to develop any one quotation which would reflect accurately the price of butter of a given grade at a given level of trade. It appears more important that the quotation should accurately reflect changes in supply-demand conditions than that it reflect an average or "true" value of the commodity.

ANALYSIS OF DAILY BUTTER PRICES

The High and the Low of the Range of Prices Reported by USDA

The USDA Market News Service frequently reports a range of prices for butter. In 1948, for instance, a range was reported in the price of 92 score butter at Chicago on 145 occasions and a single price was reported on 111 occasions; the Chicago Price Current reported a range on only 5 occasions. Sales of butter on the exchange frequently appear as the low of the USDA range. The high of the range reported by USDA tends to reflect open-market transactions.

Differences Between USDA and Commercial Quotations

The commercial quotations are generally used by receivers as a basis for both buying and selling transactions. Sales of wholesale bulk butter on the open market are generally made at a markup over the commercial quotation. Wholesale selling prices reported by USDA would be expected to tend to reflect the quotation plus the wholesale markup.

This markup should cover the receivers' costs of receiving and handling the butter, profit, and also a charge which may tend to reflect the premium which was attached to the butter at the creamery level. The difference between the wholesale selling prices reported by USDA and the commercial quotations also at times tends to reflect changes in market conditions which have developed after the commercial quotation has been issued in the morning and the time that the USDA report is issued in the afternoon. For instance, if considerable weakness develops for one reason or another after the close of the exchange trading session, it is not unusual for the USDA market reporter to find transactions being made at the "market" or, on occasion, 1/4 cent under the market. This generally foreshadows a drop in values on the spot market the following day. On the other hand, late strength in the market may cause a markup over the quotation which is higher than usual. The USDA daily market report, therefore, serves at times as an indicator of the direction the commercial quotation may be expected to move on the following day.

Also, it would appear reasonable that the differential between the wholesale selling prices reported by USDA and the commercial quotation would bear some definite relationship to the general level of premiums paid by receivers to creameries. Such premiums are known to vary and it would appear reasonable that the wholesale markup would be higher when the general butter supply situation was tight and the level of premiums was generally high than when the level of premiums at the creamery level was low.

During 1940, 1941, and 1942 the wholesale selling prices reported by USDA for butter at Chicago and at New York were almost always identical with the commercial quotations appearing in Chicago Price Current and Producers Price Current, respectively. (See tables 15 and 16.) For example, wholesale selling prices reported by USDA for 92 score butter at Chicago were the same as the Chicago Price Current quotation for 92 score butter on 298 out of 304 trading days during 1941.

For the years 1946 to 1951, the wholesale selling prices reported by USDA for butter at Chicago and New York were generally higher than the corresponding commercial quotations. If the high of the range is used, when a range is reported, prices reported by USDA averaged about 1/2 cent higher than the commercial quotation at Chicago and about 1/4 cent higher than the commercial quotation at New York. Using the low of the range, when reported, USDA prices averaged 1/4 cent more than the commercial quotation at Chicago; but at New York if the low of the range was used USDA prices for 92 score butter averaged 5/100 cent less than those reported by the commercial market reporter. (Table 17.)

The high of the range--when reported--of prices reported by USDA for 92 score butter at Chicago was the same as the commercial quotation at Chicago on 12 percent of the trading days during the period 1946-51. Using the low of ranges--when reported--the USDA prices were the same as the commercial quotation on 39 percent of the trading days. (Table 15.)

At New York, if the highs of reported ranges are used, the USDA prices were the same as the commercial quotation 39 percent of the trading days; and if the lows of reported ranges are used, USDA prices were the same as the commercial quotation 74 percent of the time. (Table 16.)

It has been mentioned that sales of butter on the mercantile exchanges often appear as the low of the range of prices reported by USDA. In 1948, butter was sold on the New York Mercantile Exchange on 220 out of approximately 250 trading days, whereas in Chicago sales were made on only 126 days. In 1951, exchange sales were made on nearly twice as many days at New York as at Chicago although the volume of sales on the two exchanges was approximately equal. The fact that exchange sales are made on a much greater proportion of the trading days at New York probably is an important factor in explaining the fact that USDA prices and Urner-Barry prices are the same a great deal of the time when a comparison is made using the low of the range, when ranges were reported.

The apparent explanation of why the wholesale selling prices reported by USDA were almost identical with the commercial quotation during the period 1940, 1941, and 1942, but were consistently higher during the period of time OPA maximum price regulations were in effect and in the post-OPA period lies in several different factors, as follows:

1. On December 30, 1942, the USDA announced that, with the introduction of dollars and cents ceiling prices on butter (effective December 30, 1942), wholesale selling prices reported would include, as well as open-market sales, contract sales made at fixed

Table 15.--Frequency distribution of differences between wholesale selling prices reported by USDA for 92 score butter at Chicago and Chicago Price Current quotation for 92 score butter, 1940-41 and 1946-51

Amount by which USDA exceeded Chicago Price Current	: 1940	: 1941	: 1946 ^{1/}	: 1947	: 1948	: 1949	: 1950	: 1951	: Total 1946-51
Cents	Number	Number	Number	Number	Number	Number	Number	Number	Number
<u>Using high of USDA range^{2/}</u>									
+ 2.00				1	2				3
+ 1.75				1					1
+ 1.50				5	23	1			29
+ 1.25					1				1
+ 1.00			3	20	46		1	2	72
+ 0.75			14	7	7	11	78	19	136
+ 0.50			53	120	108	108	118	162	669
+ 0.25	8	6	13	40	22	116	55	66	312
0.00	294	298	41	59	45	17		4	166
- 0.25	1			1					1
- 0.50			1						1
- 0.75									
- 1.00					1				1
- 1.25									
- 1.50									
<u>Using low of USDA range^{2/}</u>									
+ 2.00					1				1
+ 1.75									
+ 1.50				1	7				8
+ 1.25				1		1			2
+ 1.00				17	16				33
+ 0.75				1	7		1	1	10
+ 0.50			41	89	90	31	96	37	384
+ 0.25	8	6	7	18	18	73	127	118	361
0.00	294	298	72	111	98	137	25	91	534
- 0.25	1		2	8	3	8	3	5	29
- 0.50			3	7	8	3		1	22
- 0.75					1				1
- 1.00				1	5				6
- 1.25									
- 1.50					1				1

^{1/} Last 6 months.

^{2/} When a single price was reported by USDA it was considered as both the high and low of a range. Chicago Price Current quotations are generally in the form of a single price. On the infrequent occasions when ranges were reported, the midpoint was taken.

Table 16.--Frequency distribution of differences between wholesale selling prices reported by USDA for 92 score butter at New York and Urner-Barry quotation for 92 score butter at New York, 1940-41 and 1946-51

Amount	:	:	:	:	:	:	:	:	:
by which	: 1940	: 1941	: 1946 ^{1/}	: 1947	: 1948	: 1949	: 1950	: 1951	: Total
USDA exceeded:	:	:	:	:	:	:	:	:	: 1946-51
Urner-Barry	:	:	:	:	:	:	:	:	:

Cents	Number	Number	Number	Number	Number	Number	Number	Number	Number
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Using high of ranges reported by USDA and Urner-Barry^{2/}

/ 2.00					1				1
/ 1.75									
/ 1.50					2				2
/ 1.25									
/ 1.00				13	12			1	26
/ 0.75				11	5	1	1	6	24
/ 0.50		1	22	93	53	38	84	109	399
/ 0.25	2	6	7	42	36	58	123	113	379
0.00	268	241	93	91	142	153	41	21	541
- 0.25	1	2				1			1
- 0.50		1			1				1
- 0.75			1						1
- 1.00									
- 1.25									
- 1.50			1	1					2
- 1.75									
- 2.00									

Using low of ranges reported by USDA and Urner-Barry^{2/}

/ 2.00									
/ 1.75									
/ 1.50									
/ 1.25									
/ 1.00			1		1				2
/ 0.75			2	1		1		1	5
/ 0.50		2	9	8	10				27
/ 0.25	86	63	8	13	4	8	16	4	53
0.00	184	184	94	197	182	158	204	206	1041
- 0.25	1	1	3	12	20	55	19	29	138
- 0.50		1	3	14	29	17	10	6	79
- 0.75				2	1	10		2	15
- 1.00			1	2	4	2			9
- 1.25			1					2	3
- 1.50			2		1				3
- 1.75									
- 2.00					2				2

^{1/} Last 6 months.

^{2/} When a single price was reported it was considered as both the high and the low of a range.

Table 17.--Average difference between daily wholesale selling prices reported by USDA for 92 score butter and daily commercial quotations for 92 score butter at Chicago and New York, 1940, 1941, 1946-51

Year	Chicago		New York	
	Amount by which	Amount by which	Amount by which	Amount by which
	high of USDA range	low of USDA range	high of USDA range	low of USDA range
	exceeded Chicago	exceeded Chicago	exceeded high of	exceeded low of
	Price Current	Price Current	Urner-Barry	Urner-Barry
	quotation 1/	quotation 1/	range 1/	range 1/
	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>
1940	0.01	0.01	*	0.08
1941	*	*	*	.06
1946 2/	.34	.16	0.08	.01
1947	.42	.25	.31	-.04
1948	.59	.28	.22	-.07
1949	.37	.12	.14	-.12
1950	.52	.32	.30	-.02
1951	.45	.19	.35	-.05
Average				
1946-51	.45	.22	.24	-.05

1/ When a single price was reported it was considered as being both the high and the low of a "range," except in the case of prices published by Chicago Price Current. Since ranges are quoted very infrequently in Chicago Price Current it was impractical to develop a separate series for low and high of quotations. When ranges were reported by Chicago Price Current the midpoint was taken.

2/ Last 6 months.

* Less than 0.01.

markups over the quotation, and that ranges would be reported. The USDA Market News Service explained the change as follows. 27/

"Under the former plan of reporting, published wholesale prices applied to open market sales only. This included goods which upon arrival were sold on the open market to buyers who were looking for goods on a strictly competitive basis, and who bought at a price, rather than at some agreed differential in relation to a published quotation. This included sales on exchanges, if any, and sales on the street which fell in the above category. It did not include sales of lots from well known marks made at differentials over published quotations, or from lots known to possess unusually uniform quality or having other known desirable characteristics.

"The revised method of reporting wholesale prices merely represents a broader coverage with respect to wholesale transactions. As stated on the published reports, wholesale prices now reflect all types of wholesale trading for cash or short-time credit, including open-market sales, sales of special or premium marks, and sales at agreed differentials in relation to published quotations."

The OPA regulation establishing dollars and cents ceiling prices on butter established a basic price (a primary receiver's buying price) and also provided for a markup for sales of bulk butter at wholesale over this base price. This markup was first a permissive markup based on individual receiver's markups during a base period; later a fixed markup was allowed. This action undoubtedly influenced the announced change in reporting policy on the part of the USDA Market News Service, since if the price reported by USDA was to be representative of wholesale selling prices it necessarily would include such markups. Previous to that time, although identified as a wholesale selling price, it had nearly always been the same as the commercial quotation and therefore tended to have more of the characteristics of a basing price than a wholesale selling price.

2. Prior to the advent of OPA price ceilings on butter late in 1942, the wholesale selling prices reported by USDA had been reported as single prices and were more widely used as a settlement basis than at the present time. The USDA representative in charge of the Chicago Dairy and Poultry Market News office in 1939 stated that because the USDA quotation was being used for settlement purposes it was extremely difficult to obtain information as to wholesale selling prices which differed from the commercial

quotation. 28/ The trade currently uses the wholesale selling prices reported by USDA less frequently for settlement purposes, and for this reason apparently is less concerned about revealing sales which were made at the commercial quotation plus a markup than previously.

3. Although relatively limited, considerably more open-market selling of wholesale bulk butter apparently existed in the late 1930's and early 1940's than exists at the present time; and apparently receivers were able to buy more butter at country points at a discount below the quotation than is currently possible. Such butter often could be sold in the open market at the quotation and still cover the receiver's costs of handling the butter. This, in part, reflects the generally long supplies of butter during that period. Competition from large integrated butter-marketing organizations and the trend in the direction of the development of a jobbing type business on the part of many wholesalers in recent years has probably had the effect of raising the level of premiums paid at country points, reducing the potential volume of butter which is bought at such a price that it may be sold profitably in the open market at the flat quotation.

28/ This information was reported by Gordon W. Sprague during the course of an interview with the writer.

APPRAISAL

This study was undertaken to obtain a description of a part of the butter-marketing system as one step toward a complete appraisal of central market butter prices. The results were comprehensive enough to make an appraisal of some of the more frequent criticisms of central market butter prices, to indicate some of the shortcomings of present methods of establishing butter prices, to point out obstacles to be overcome in correcting these shortcomings, and to indicate certain lines of action which might broaden the basis for establishing central market butter prices.

Appraisal of Criticisms

Complaint that central market quotations "underquote" the market

An analysis of prices received by a large group of creameries in the North Central Region and a study of butter pricing at Iowa creameries substantiates the fact that a large number of creameries receive premiums over the New York or Chicago commercial quotations. ^{29/} Information obtained during this survey also indicated that premiums are commonly paid over the commercial quotations on open-market wholesale transactions. Therefore, the commercial quotations do not represent an "average" price at which butter is being bought and sold. Receivers know that quotations are not average prices as do most creamery managers. For those who understand that the quotations represent basing prices rather than average prices, the fact that quotations do not reflect an average price is not a serious weakness.

On the other hand, some creamery managers apparently do not fully understand the nature of the commercial quotations or the distinction between them and wholesale selling prices reported by USDA. Also, many persons other than those engaged in the buying and selling of butter make widespread use of the quotations. For example, numerous Federal milk marketing orders use central market butter prices in computing formula prices for fluid milk. It is probably desirable that market prices used in such formulas reflect average market values--not basing prices. At least, it is essential for those constructing such formulas to understand the relationship of the central market quotation to the average price received for butter at wholesale or f.o.b. creamery.

The development of a price which would reflect the average price received for butter f.o.b. creamery is not feasible on a daily basis.

^{29/} See source cited in footnote 2; also, Mathis, A. G. and Hirsch, D. E. Butter Pricing by Iowa Creameries. FCA. USDA. May 1950, and Mathis, A. G. Market News Reporting of Butter Prices Received by Creameries. USDA. PMA. March 1952.

Information as to the size and nature of premiums is important market information, but should be reported separately. Since the size of premiums tends to change only over longer periods of time, a monthly or bimonthly report would probably be sufficient.

Information as to the size of markups on wholesale open-market sales is also important market information which may be obtained to a limited extent from wholesale selling prices presently reported by USDA. Separate information concerning daily markups on open-market transactions would be useful market information, since such information may indicate changes in market sentiment which develop after the spot butter call has closed.

Considering the nature of the butter-marketing system, it appears more important that the daily central market quotations reflect accurately changes in the supply and demand for butter than that they reflect "average" daily wholesale prices.

Complaint that butter prices fluctuate unduly from day to day

Analysis has shown that although daily butter prices have fluctuated considerably from day to day at certain periods of time they are not more variable than are the daily prices of several other agricultural commodities. The sometimes erratic pattern both of production of butter, from week to week, and of movement of butter into retail channels appear to be important factors which cause price instability. The thinness of the market on which prices are based also probably gives disproportionate weight to individual transactions and at times makes the market unduly sensitive to short-time supply-demand conditions. A broader basis for establishing values would probably tend to minimize the effect of individual transactions and would tend to reduce the size and number of daily price fluctuations.

The Chicago market quotations are less variable than are the New York quotations. This might indicate that the forces brought to bear in the trading on the Chicago Mercantile Exchange were broader and more diversified than those at the New York Mercantile Exchange.

Complaint that the market is too thin to provide an adequate basis for quoting the market

Commercial quotations are based on a limited volume of trading by a relatively few traders on the Chicago and New York mercantile exchanges. Nevertheless, the 25 to 30 traders interviewed during this study receive and distribute a large proportion of the butter which is marketed in the United States. They follow the trading on the mercantile exchanges closely and, although many of them trade only infrequently on the exchange, they are prepared, if necessary, to offer butter or bid for butter on the exchanges in order to attempt to protect their own interests as to value. The price which is quoted on the basis of the exchange trading becomes the basis for thousands of other transactions, and, since this is true,

an individual trader cannot ordinarily keep the market "out of line" with the sentiment of the trade unless he is willing to buy or sell sizable quantities of butter.

Nevertheless, the thinness of the market makes it possible for individuals occasionally to exert disproportionate influence on the market for short periods of time. This is true particularly during periods of time when supplies of uncommitted butter in the market are relatively small.

The fact that the spot boards do not serve as market places where sizable quantities of butter may be bought or sold without disproportionate influence on price throughout the country is undesirable.

Technically, anyone may buy or sell butter on the spot butter markets of the mercantile exchanges. Certain rules of the mercantile exchanges make it inconvenient for receivers not located in or near Chicago or New York to offer supplies of butter for sale on the exchange on short notice.

The analysis which was made provided information as to why the trading on the spot butter markets is limited. Under the present marketing system a large proportion of the butter moves directly from the creamery into the hands of integrated marketing agencies which control distribution of the product through to the retailer or institutional user, and for this reason the spot butter markets cannot do more than serve as a supplemental source of supplies or as an outlet for surplus supplies. At present, receivers prefer to balance supplies on the open market rather than on the spot butter boards because the spot butter markets are not a satisfactory source or outlet for supplies of butter, for the following reasons:

1. The exchange represents a less satisfactory outlet for supplies than the open market because receiving and handling costs are not recoverable on exchange sales. The exchange is a loss outlet for supplies on which premiums have been paid. For this reason only limited quantities of butter are offered on the spot call.
2. Butter is not available for inspection prior to purchase and, notwithstanding its being sold on the basis of USDA grades, it may not meet the buyer's requirements with respect to certain characteristics, not reflected by grade, such as salt, color, and storability.
3. It is easier to buy direct from creameries or on the open market. Many receivers, particularly those located outside of Chicago or New York, find it inconvenient to offer supplies for sale on the spot call or to accept delivery of supplies at Chicago or New York.
4. Certain large buyers refrain from buying or selling on the exchange because of a desire not to become involved directly in transactions which serve to establish prices.

Because the exchange is not a satisfactory market place the trading is limited. The thinness of the market further complicates the problem of increasing the volume of trading, because, owing to the thinness of the market, buying or selling sizable quantities of butter on the exchange has "too much" effect on the quotation. This in itself is a major deterrent to using the exchange as a market place.

If the spot butter markets of the mercantile exchanges could more adequately serve as a market place for the limited open-market trading which takes place, individual transactions would have less effect on price and there would be less tendency for actions on the part of individuals to be looked upon as price-making transactions.

POSSIBLE LINES OF ACTION

Reporting Open-Market Trading

One approach to the problem of broadening the basis for wholesale price reporting is to obtain price information on open-market sales or sales on the "street," as well as on the exchanges. This is presently being done by the USDA Market News Service. It has been argued that the procedure followed by the USDA Market News Service should result in a much broader coverage of the market than is reflected by exchange transactions because of the larger number of transactions on which price information is reported.

The USDA Market News Service provides useful information as to tone of the market and trends in market sentiment which develop after the spot call has closed and the commercial quotations have been issued. Because the USDA daily market report is not issued until approximately 4 hours after the commercial quotation has been issued, the USDA reporter may obtain information on late transactions which indicate developing strength or weakness in the market. Such trends are often indicated by reports of butter selling at more or less than the normal wholesale markup. Also the Government market news reporter, through his contacts in the market, may obtain information from dealers as to the willingness of buyers to buy or sellers to sell at prevailing levels which, at times, may differ from the market sentiment expressed on the exchange, or which may serve to verify sentiment expressed on the exchange.

There are significant advantages in having a Government market reporter in the market. His presence provides a public audit of a sort on the commercial butter quotation. Yet, because of the limited volume of open-market trading, the prevailing practice of buying and selling on the basis of the quotation, and the tendency of the trade to support the commercial quotation in reporting prices to the market reporter, the wholesale selling prices reported by USDA for butter at Chicago and at New York are closely related to the commercial quotation. The additional information which the USDA reporter obtains uncovers only a small part of the forces which bring about basic changes in price. Many of the weaknesses of the commercial quotation are "built-in" in the USDA wholesale selling price since the commercial quotation is such a dominant force in establishing values.

Since the wholesale open-market trading provides an unsatisfactory means for broadening the basis of establishing central market butter prices, it would appear that any steps which are to be taken to broaden the basis for establishing central market butter prices would lie in the direction of attempting to increase the volume of trading on the spot butter markets, since it is at this point that the forces which act to bring about changes in the price of butter may best be observed.

Experience of the Wisconsin Cheese Exchange 30/

The Wisconsin Cheese Exchange serves the same basic function which the spot butter markets of the Chicago and New York mercantile exchanges serve, namely, that of providing a mechanism for establishing and posting values. In the 1920's and 1930's, the cheese exchange was severely criticized because of the fact that the volume of sales was very small, the number of traders was small, the same individuals participated in the trading week after week, and wash sales were made. An unfavorable report of the operations of the cheese exchange was made by the Federal Trade Commission in 1928. A hearing held in February 1931 by the Wisconsin Department of Agriculture and Markets disclosed the existence of many undesirable features. In 1942, an indictment was issued by a grand jury of the U. S. District Court in Chicago against the Wisconsin Cheese Exchange and 47 other firms and 57 individuals. The American cheese indictment denied the exchange was a free market and enumerated a number of specific charges. Charges were dropped against all but 11 of the defendants in 1949 and charges against the remaining 11 were dropped in April 1950.

The Wisconsin Cheese Exchange has in recent years made major revisions in its trading rules which apparently have had the effect of increasing the volume of trading substantially. A recent survey indicated that the Wisconsin Cheese Exchange now serves an important function as a market place.

The volume of sales on the Wisconsin Cheese Exchange during the 5-year period 1947-1951 was 1,443 percent greater than during the 5-year period 1933-1937 which immediately preceded the major revision of the trading rules of the exchange in 1938. (Table 13.) Trading on the Wisconsin Cheese Exchange takes place only once a week and lasts for half an hour. Therefore, annual sales represent the volume of trading at 52 trading sessions, whereas the annual volume of sales on the spot butter markets represent the total of sales on approximately 250 trading days.

Changes in trading rules

Changes which were made in the trading rules of the Wisconsin Cheese Exchange which apparently had the effect of making it a more desirable market place to buy and sell cheese were:

1. The exchange discarded the auction and call board system in favor of a system of firm bids and offers (similar to that presently used on the spot butter call of the Chicago and New York Mercantile Exchanges).
2. The board was opened for the sale of all kinds of cheese. Previously, only American cheese, 4 to 30 days old could be offered.

30/ The material in this section is based on information contained in Research Bulletin 163 of the University of Wisconsin. "Pricing American Cheese at Wisconsin Factories." By Arthur H. Miller. August 1949.

3. The assembling charge to be paid by the buyer to the seller was increased.
4. A freight differential was established for all carload sales. This differential was equal to the amount by which shipping charges from point of shipment to Chicago, Ill., exceeded shipping charges from Plymouth, Wis., to Chicago, Ill.

In 1940 the Wisconsin Cheese Exchange adopted a rule which made the facilities of the exchange available to any licensed cheese factory without charge for the sale of its unparaffined, ungraded cheese f.o.b. factory. In 1947, the rules were further revised to provide for the sale of cheese manufactured in States other than Wisconsin when sold according to U. S. grades.

Table 18.--Volume of sales of cheese on the Wisconsin Cheese Exchange, by years, 1933-1951

Year	Sales	Year	Sales
	Pounds		Pounds
1933 - - - - -	661,160::	1943 - - - - -	2/ 19,946,986
1934 - - - - -	673,446::	1944 - - - - -	2/ 12,935,393
1935 - - - - -	1,038,650::	1945 - - - - -	2/ 14,270,675
1936 - - - - -	1,133,650::	1946 - - - - -	2/ 7,237,485
1937 - - - - -	495,800::	1947 - - - - -	11,722,484
1938 - - - - -	1/ 2,995,900::	1948 - - - - -	14,068,125
1939 - - - - -	2,888,600::	1949 - - - - -	10,646,450
1940 - - - - -	5,795,500::	1950 - - - - -	7,004,152
1941 - - - - -	2/33,692,532::	1951 - - - - -	14,329,275
1942 - - - - -	2/56,343,557::		
	::		

1/ Major revision of trading rules became effective August 19, 1938.

2/ During the period July 1941-June 1946, the U. S. Department of Agriculture purchased 134,005,328 pounds of Cheddar cheese on the Wisconsin Cheese Exchange.

Compiled from data supplied by the Wisconsin Cheese Exchange.

Possible Means of Increasing the Volume of Exchange Trading in Spot Butter

Certain amendments to the spot butter rules of the Chicago and New York mercantile exchanges might be beneficial in broadening the trading on the spot butter market. The following amendments probably would make the spot butter boards a better outlet for surplus butter and a better source of supplementary supplies:

1. Provide that butter which is located at approved warehouses at designated points in the producing area might be offered on the spot call of the Chicago or New York mercantile exchanges.
2. Provide for a fuller description of butter offered on the spot call than is now provided, particularly information as to color and salt content.

The suggested changes probably would make the spot butter markets a more desirable place to buy or sell butter. Although there are definite limits to the extent to which the volume of trading in spot butter can be increased, if more dealers could be induced to use the spot butter markets as a place to conduct their generally limited open-market trading the results would be beneficial as far as broadening the basis for quoting prices.

The Chicago Mercantile Exchange has given consideration in the past to establishing a receiving and handling allowance on sales of butter on the spot call. There is some question as to the justification for such an allowance, and as to the effect such an allowance might have on the level of the quotation. Further consideration might be given by the exchange to the efficacy of such an allowance in making the exchange a more suitable place to buy or sell butter.

The essence of the proposal is that the buyer would pay the seller a receiving and handling charge (on butter bought on the spot call) so that a receiver selling butter on the spot board would be compensated for the costs of receiving and handling the butter. Since butter is ordinarily sold on the open market at a markup of from 1/4 to 1/2 cent over the quotation, the spot board ordinarily provides a less satisfactory outlet for surplus butter than does the open market because receiving and handling costs cannot be recovered on sales on the spot board. It is difficult to judge what effect such an allowance might have on the level of the quotation.

Sellers would probably be willing to offer more butter for sale on the exchange because they would be able to sell butter at approximately the same markup over the quotation on the exchange as on the open market, and the allowance which they received would not be reflected in their settlement base with creameries (the quotation).

If the allowance stimulated offerings on the part of sellers, more buyers generally might give consideration to buying on the exchange. One apparent deterrent to trading which presently exists is the limited volume of butter offered for sale.

Different reactions might be expected on the part of different buyers as follows:

1. Those buyers placing a premium on non-grade factors might not be willing to pay more for butter purchased on the exchange relative to the open market than before, if they found that even with a greater volume of offerings on the exchange they were

unable to buy USDA graded butter which suited their requirements. The markup on certain "marks" of butter on the open market might then increase and cancel out part of the effect of the allowance.

2. Buyers to whom USDA grades provide adequate information concerning the butter they buy probably would be willing to absorb all of an allowance which reflected approximately the markup which they now pay on the open market for butter, if such purchases did not impair their settlement basis (the quotation). For example, a buyer who presently engages in a transaction on the exchange which serves to establish a quotation of 66 cents is in effect expressing a willingness to buy supplies on the open market at 66 1/4 to 66 1/2 cents. Since sellers would be more willing to sell if they were paid an allowance on exchange sales, purchases of butter in volume on the exchange probably would have less tendency to "run up" the market than at present.
3. To the extent that buyers on the exchange would not absorb the assembling charge direct buyers might be expected to adjust upward their premiums paid to creameries, thus in part canceling the effect of the allowance.

It would appear reasonable to expect that a considerable part of the allowance might be absorbed by buyers and that the part not absorbed would be offset by a change in the premium structure, so that producers would not be affected adversely even if buyers refused to absorb all of the allowance.

The proposals that further description be given of butter offered on the exchange and that changes be made to permit the offering of butter for sale on the exchange at points outside of Chicago and New York would tend to make the exchange a more desirable place to buy and sell supplies and probably would influence the extent to which buyers would be willing to absorb the assembly charge.

On the basis of information obtained during this survey, it was possible to estimate the maximum amount by which trading on the spot butter boards might be increased. Receivers from whom information was obtained handled 868 million pounds of butter. Between 10 and 15 percent of this butter was obtained on the basis of open-market transactions between dealers--that is, transactions which were made more or less independent of the quotation. Most of these transactions could potentially be executed on the spot butter boards if the rules of the exchanges were changed to make them more desirable places to buy and sell butter.

If all the open-market trading were done on the exchanges, and if this were 10 percent of the butter handled by major receivers, approximately 87 million pounds of butter might be sold on the spot butter boards. In 1951 about 8 million pounds of spot butter were sold on the New York and Chicago mercantile exchanges, or about 9 percent of the potential volume which might be expected on this basis.

It probably would be unreasonable to expect more than one-half of the open-market trades to be negotiated through the facilities of the exchanges even if the spot butter boards were made more attractive market places. Yet, even this would mean an annual volume of sales on the exchanges in the neighborhood of 40 to 50 million pounds, or about six times as much as is presently being sold on the exchanges.

Periodical Report of Premiums Being Received

In order to enable those using the central market butter prices to relate such prices to average prices actually being received by creameries, consideration should be given to development of a periodic report on the level of premiums being received at a group of representative creameries in different parts of the production area. It would be necessary, of course, to consider all terms of a creamery's selling agreement with its receiver or receivers in reporting this type of information. It probably would be necessary to report such information on a State basis. Since the level of premiums probably does not vary appreciably from day to day but only over longer periods of time, monthly, bimonthly, or even quarterly reports probably would be satisfactory.

The development of such a report would present many problems. For instance, a creamery may produce 90 score butter at certain times of the year and 92 score butter at other times, yet the creamery may receive the same price, relative to a specified quotation, throughout the year. Conditions of sale with respect to whether prices are f.o.b. creamery or f.o.b. a specified market, whether or not packaging materials are furnished, and so forth, influence net prices received. Nevertheless, problems involved in developing such a report probably are no more complex than those involved in reporting much of the information which is presently reported.

Research's Contribution

The institutional pattern which dominates the system of butter price establishment is very strong. The present system of price establishment has been in existence in about the same form since the early 1900's. From time to time the system has been sharply criticized. Nearly all dealers admit that the pricing system is open to certain abuses, yet it provides by and large a workable means of establishing butter values as far as most butter receivers and distributors are concerned. They understand it and they understand its weaknesses.

Perhaps the greatest weakness of the system is the fact that others, who do not regularly buy or sell butter and do not fully understand the complexities of the butter marketing system or the nature of the quotation, must rely on central market quotations as a measure of the value of butter.

It is doubtful whether the recommendations of this report or others could bring about any substantial changes in a system which is so deeply

rooted in the minds of receivers and distributors of butter. Perhaps the greatest contribution that research can make toward the solution of the deficiencies in the system of central market butter price establishment lies in providing a better understanding of the nature of central market butter prices, rather than in changing the institutional pattern by which prices are established.

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